

Cover Page



**BIRMINGHAM CITY
University**

**NARCISSISM PREVAILS? THE IMPACT OF PERSONALITY TRAITS ON
FINANCIAL RESOURCE ACQUISITION IN UK SMEs**

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University for the degree of Doctor of Philosophy**

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Declaration

This work has not been previously accepted in substance for any degree and is not being concurrently submitted for any other degree. I further declare that this thesis results from my independent work and investigation, except where otherwise stated (a bibliography is appended). Finally, I will consent to my thesis if it is accepted now.

Signed ----- C. Bailey.

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Summary of Key Definitions

Concept	Definition
GDP	Gross domestic product is the annual total value of goods produced, and services provided, excluding transactions to or from other countries.
Openness to Experience	It is the disposition to be imaginative, artistic and autonomous.
Conscientiousness	Showing equity, scrupulousness, reasonableness, and fair-mindedness.
Extraversion	Extroversion is the thrusting of the mind onto life, using the mind in practical affairs, and pouring out of the libido on external objects.
Agreeableness	The quality or state of being agreeable, enjoyable, pleasing, likeable, pleasantness.
Neuroticism	The condition or state of being neurotic; a tendency towards neurosis, particularly as a factor in psychological personality assessment.
Narcissism	Excessive self- love or vanity; self-admiration, self – centredness.
Entrepreneur	A person who owns and manages a business bears the financial risks of the enterprise. A person who sets up a business or business taking on financial risks.
Entrepreneurship	Activity, behaviour, or attitudes characteristic of an entrepreneur or entrepreneurs.
Internal Source of Funding	The term internal source of funding refers to money from within the business. Examples of internal sources of finance/ funding are owners' funds, retained profits, and funds from family and friends.
External Source of Funding	The term external source of funding refers to money from outside the business. Most often, the funding comes from external sources such as banks, investors, financial institutions, and other individual investors.

Summary of Abbreviation

Abbreviation	Definition
AGREE	Agreeableness
BCU	Birmingham City University
BEFE	Battery for the Assessment of the Enterprising Personality
BFT	Big Five Theory
CEO	Chief Executive officer
CFO	Chief Financial Officer
CONS	Conscientiousness
EO	Entrepreneurial Orientation
EXTRA	Extraversion
FF	Family Firm
GDP	Gross Domestic Product
IPO	Initial Public Offering
NARC	Narcissism
NEURO	Neuroticism
OPEN	Openness to Experience
POT	Pecking Order Theory
RBV	Resource Based View
SFI	Small Firm Innovation
SME	Small and Medium Size Enterprises
TOT	Trade-off Theory
UK	United Kingdom
VC	Venture Capital

Abstract

SMEs and entrepreneurs significantly impact the UK economy by contributing to GDP, productivity, and employment. Despite extensive research, there is limited focus on how the entrepreneur's personality influences entrepreneurial finance. This study explores this gap by examining the big five personality traits (openness, conscientiousness, extraversion, agreeableness, neuroticism) and narcissism. The research also examines whether there was any association between narcissism and preferences for internal or external funding, whether openness to experience and extraversion moderated preference for external funding and finally examines whether narcissism influences successfully obtaining external funding at the first attempt. Narcissism Personality Theory in the literature refers to an individual who is grandiose, arrogant, and haughty, considers themselves superior or better than others, and expects special treatment.

The research employs a quantitative approach by collecting primary data from 250 UK SME entrepreneurs using a questionnaire. The findings support the theoretical framework within theories on personality that examines relationship between narcissism theory and the Big Five theory. There is a significant association between narcissism and openness to experience, extraversion and agreeableness; some literature states that narcissistic entrepreneurs are not very agreeable. There is no significant association between narcissism, conscientiousness and neuroticism. There is a statistically significant relationship between narcissistic entrepreneurs preferring external to internal funding. Openness to experience, and extraversion are statistically insignificant with preference for external to internal funding. Though openness to experience and extraversion magnifies the relationship a stronger association for the preference for external funding. This relationship becomes statistically insignificant when openness and extraversion with the influence of narcissism and preference for external and internal funding. Given that narcissistic entrepreneurs' self-perceptions are considered self-absorbed and egoistic, there was no surprise that they may prefer external funding. Therefore, it was important to examine entrepreneurs who were successful at receiving external funding in the first attempt to separate their perception from reality. The empirical results for those entrepreneurs who were aware of the success in funding at the first attempt were insignificant. Despite their self-perception as risk-takers and self-absorbed individuals, narcissistic entrepreneurs do not show a significant success rate in obtaining external funding on the first attempt. In conclusion, while narcissistic entrepreneurs prefer external funding due to their personality traits, their success in securing such funding is insignificant.

Dedication

This thesis is dedicated to God. I want to thank God, Jesus Christ and the Holy Spirit for their help during the PhD journey. It has been a challenging journey, and I am grateful for the faithfulness of God and his everlasting love. Secondly to my parents, my father, **Mr. Litton Lloyd Bailey** and my mother, **Mrs Clovis Austin Bailey**. They have made great sacrifices for my education and progression academically and professionally. I would also like to thank my siblings and friends, who have been very supportive during the challenging times of my PhD.

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Thesis – Research Summary

Figure 1 Structure of the Research

Chapter 1-4: RESEARCH PROBLEM AND DEFINITION

- Introduction
- Research Problems
- Research questions, aims and objectives
- Literature review
- Theoretical background to the theory
- Research gap
- Hypothesis development

Chapter 5: RESEARCH METHODOLOGY

- Philosophy of research methodology
- Piloted Activities
- Selection and justification of the research method
- Research design
- Statistical design
- Operational design

Chapter 6: RESEARCH ANALYSIS AND FINDINGS

Theoretical Framework (Stage 1)

Literature review

Quantitative analysis (Stage 2)

Correlation Analysis (Matrix)
Simple linear regression, Multiple linear regression, Binary logistic regression

Design of the conceptual framework

Chapter 7: CONCLUSION AND FUTURE RESEARCH

- Summary of significant research results
- Research contribution to entrepreneurial finance and personality traits
- Recommendations and limitations of research study
- Implications of research outcomes for future studies

INTRODUCTION

Background

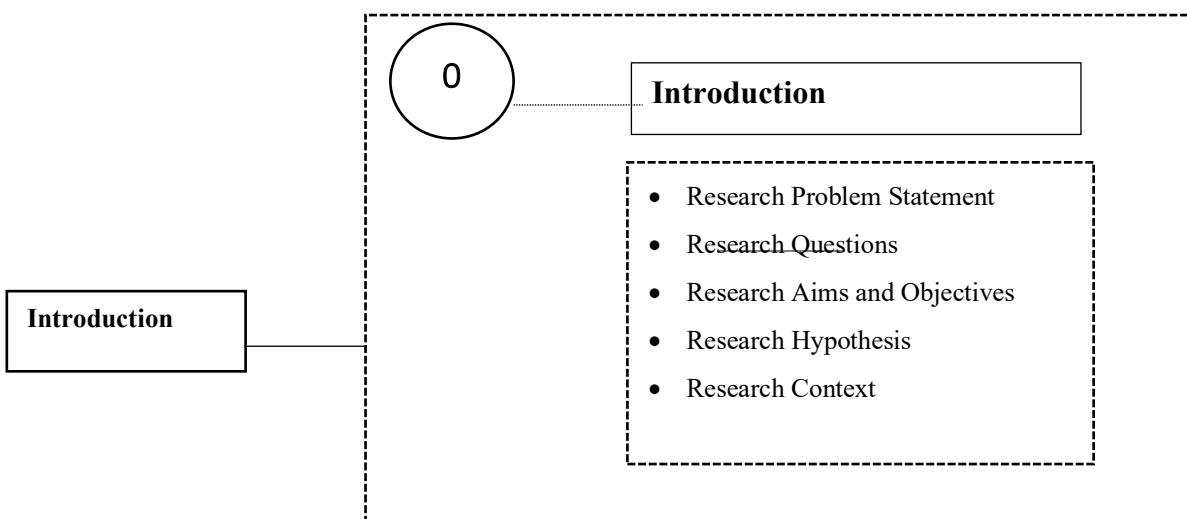
There have been studies on the personality of UK entrepreneurs. However, limited cross-sectional research has focused on the field of narcissism and entrepreneurial finance and how the entrepreneur's personality influences financing decisions. This doctoral research will explore the personality of 250 UK SME entrepreneurs and how their personalities shape financing decisions and preferences for external sources of funding in comparison to internal sources of funding. The research will examine, using an empirical approach, the relationship between the entrepreneur's Big Five personality traits and the association with narcissism and how personality shapes the financial decision of UK entrepreneurs, in terms of whether they prefer external funding to internal funding and how this influences the success or failure of acquiring external funding. The doctoral research examines the literature on personality and entrepreneurship. The Big Five theory and narcissism have been studied and researched within the field of entrepreneurship management. However, limited research still exists on how it shapes success or failure in acquiring external funding for SMEs.

The doctoral thesis will examine this research gap by contributing to the knowledge of personality in entrepreneurial finance. Few studies have researched entrepreneurial finance and personality, and their association with financial decision-making, focusing on the Big Five theory and narcissism. The findings have concluded that entrepreneurs who are open to experience, extraverted, conscientious, and emotionally stable are most likely to be interested in entrepreneurial activities. The literature also points to the behaviour of narcissism having similarities with openness to experience and extraversion, mainly because of the exaggerated belief in their abilities and capabilities. The 'Big Five Personality' traits are demonstrated by the entrepreneur, and some of these similarities include openness to experience by pursuing new business ideas and innovation. Research demonstrates that the traits of the narcissist have a significant association with extraversion and openness to experience.

Research in entrepreneurial finance has focused on the external environment and the ability and limitations faced in securing funding at the start-up stage and throughout the various growth stages of SMEs. The entrepreneur must be examined as a focal point, particularly for policymakers, academic incubators, and accelerators. Entrepreneurs are the focal point of entrepreneurship and are the primary drivers of early-stage activities. Entrepreneurship is from an individual, behavioural, and personality perspectives (Henrekson et al., 2010). This thesis explores how narcissistic traits and personality influence entrepreneurial behaviour. Entrepreneurship and the field of management research have shown that narcissism and personality have "productive" and "unproductive" influences on

entrepreneurial activities. Therefore, this thesis explores the entrepreneur, using the narrative from the emerging literature on narcissism. The narrative focus is on narcissism, entrepreneurial personality, and entrepreneurial finance. The research draws a closer view of the evolution of entrepreneurship in modern society with Generation Z and social media, where entrepreneurship has been digitised and personified. Narcissism theory and the Big Five personality models are examined and used to develop the conceptual models to test hypotheses. A set of hypotheses was developed to assess the relationship between the entrepreneur's Big Five personality traits and narcissism in the field of entrepreneurial finance. The research aims to answer the question that remains a significant gap in the literature on personality and entrepreneurial finance.

Figure 2 Structure of Introduction



Research Problem Statement

Individual characteristics matter in the context of entrepreneurial finance, which is a widely accepted notion in industry and academics (Quas et al., 2024a). However, in recent times, most research and publications in entrepreneurial finance focus on observable factors that determine an individual's human and social capital, such as gender, culture, ethnicity, education, professional background, and religion (Quas et al., 2024a). These factors are very important in entrepreneurial finance and financial decision-making; a well-known understanding of social and cognitive science provides a much richer understanding of individuals' characteristics based on personality traits. Previous research in entrepreneurship literature has long recognised the importance of personality in entrepreneurship and the likelihood of becoming an entrepreneur, focusing on overconfidence and risk tolerance. Over the last decade, scholars have focused on more complete personality models, such as the Big Five personality, as personality has a fundamental role in investment behaviour. In recent

years, entrepreneurial finance literature has picked up on understanding the behaviour of entrepreneurs and early-stage investment. In recent times, there has also been a focus on narcissism and success in funding. Entrepreneurial finance has been studied extensively. The research problem was developed by reviewing the literature and through the theoretical lens of the Big Five model, narcissism theory and pecking order theory on financial decisions.

However, despite the relevance of individual characteristics in entrepreneurial finance, little is known regarding UK entrepreneurs and whether narcissism is related to the big five model, whether this influences the financial decisions taken by entrepreneurs, and whether they are successful during the financial resource acquisition process of entrepreneurship. Despite extensive research, there is limited focus on how an entrepreneur's personality influences the success or failure of acquiring external funding. This doctoral thesis explores this gap in the literature by examining the big five personality traits (openness, conscientiousness, extraversion, agreeableness, neuroticism) and narcissism, which is characterised by grandiosity, arrogance, and a sense of superiority. This doctoral research is focused on examining the relationship between the Big Five personality theory and narcissism amongst UK entrepreneurs and how this influences financial decisions and success in acquiring external funding. This will fill the gap in the existing literature on personality and entrepreneurial finance. The rest of the section will introduce the research aim, questions, objectives, and contribution to knowledge.

Research Questions

Based on the problem statement, the research questions will address the research gap found in the literature, which examines the relationship between the personality of an entrepreneur and the ability to make financial choices in the resource acquisition processes. Therefore, the thesis examines how the entrepreneur's personality influences the decision in their business, particularly around the source of finance, internal or external funding, and whether they succeeded. The theoretical framework draws on personality theory and Big Five Theory (BFT) studies, by examining extraversion and openness to experience, then evaluating narcissism and entrepreneurial finance. Scholars have found that personality has been a particular predictor of entrepreneurial behaviours, which has extensive research related to understanding the big five personality traits, namely, openness to experience, conscientiousness, extraversion, agreeableness and neuroticism and are the most successful predictors of entrepreneurial outcome. There is limited research on the association of the big five components and narcissism, and the relationship with financial resource acquisition in

the entrepreneurial outcome. The following section will examine the research questions, considering the theoretical framework and the research problem.

1. **Research Question one (1) (RQ₁):** *What is the relationship between narcissism and the big five personality components (openness to experience, conscientiousness, extraversion, agreeableness and neuroticism) amongst entrepreneurs in the UK?*
2. **Research Question Two (2) (RQ₂):** *What is the association between personality (narcissism, openness to experience and extraversion) and preference for internal or external funding amongst UK entrepreneurs?*
3. **Research Question Three (3) (RQ₃):** *Do personality traits (narcissism, openness to experience and extraversion), including socio-economic factors, influence the success of obtaining external funding at first attempt amongst UK entrepreneurs?*

Research Aim(s) and Objectives

This research study aims to investigate the impact of personality on the acquisition of financial resources amongst entrepreneurs within the United Kingdom.

The objectives of this doctoral research are:

1. To explore the relationship between narcissistic traits and the Big Five personality components amongst entrepreneurs in the United Kingdom.
2. To examine how narcissistic characteristics influence entrepreneurs' preference for internal funding versus external sources of funding.
3. To assess whether personality traits of openness to experience and extraversion increase the relationship between narcissism and preference for external funding.
4. To investigate whether narcissistic entrepreneurs in the UK are more likely to secure external funding on their first attempt, and the impact of socio-economic factors on obtaining funding successfully.

Research Hypothesis

Hypothesis 1 (H1): Null and Alternative

- **H₀₁:** There is no significant association between narcissism and openness to experience amongst UK entrepreneurs.
- **H₁₁:** There is a significant association between narcissism and openness to experience amongst UK entrepreneurs.

Hypothesis 2 (H2): Null and Alternative

- **H₀₂:** There is no significant association between narcissism and conscientiousness amongst UK entrepreneurs.
- **H₁₂:** There is a significant association between narcissism and conscientiousness amongst UK entrepreneurs.

Hypothesis 3 (H3): Null and Alternative

- **H₀₃:** There is no significant association between narcissism and extraversion amongst UK entrepreneurs.
- **H₁₃:** There is a significant association between narcissism and extraversion amongst UK entrepreneurs.

Hypothesis 4 (H4): Null and Alternative

- **H₀₄:** There is no significant association between narcissism and agreeableness amongst UK entrepreneurs.
- **H₁₄:** There is a significant association between narcissism and agreeableness amongst UK entrepreneurs.

Hypothesis 5 (H5): Null and Alternative

- **H₀₅:** There is no significant association between narcissism and neuroticism amongst UK entrepreneurs.
- **H₁₅:** There is a significant association between narcissism and neuroticism amongst UK entrepreneurs.

Hypothesis 6 (H6): Null and Alternative

- **H₀₆:** There is no significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs.
- **H₁₆:** There is a significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs.

Hypothesis 7 (H7): Null and Alternative

- **H₀₇:** Narcissism does not significantly influence the preference for internal versus external funding amongst UK entrepreneurs.
- **H₁₇:** Narcissism significantly influences the preference for internal versus external funding amongst UK entrepreneurs.

Hypothesis 8a (H8a): Null and Alternative

- **H_{08a}:** Amongst narcissistic UK entrepreneurs, openness to experience does not significantly influence preference for external funding.
- **H_{18a}:** Amongst narcissistic UK entrepreneurs, openness to experience significantly influences preference for external funding.

Hypothesis 8b (H8b): Null and Alternative

- **H_{08b}:** Amongst narcissistic UK entrepreneurs, extraversion does not significantly influence preference for external funding.
- **H_{18b}:** Amongst narcissistic UK entrepreneurs, extraversion significantly influences preference for external funding.

Hypothesis 9 (H9): Null and Alternative

- **H₀₉:** Personality traits (narcissism, openness to experience, and extraversion) do not significantly influence the likelihood of successfully obtaining external funding amongst UK entrepreneurs.
- **H₁₉:** Personality traits (narcissism, openness to experience, and extraversion) significantly influence the likelihood of successfully obtaining external funding amongst UK entrepreneurs.

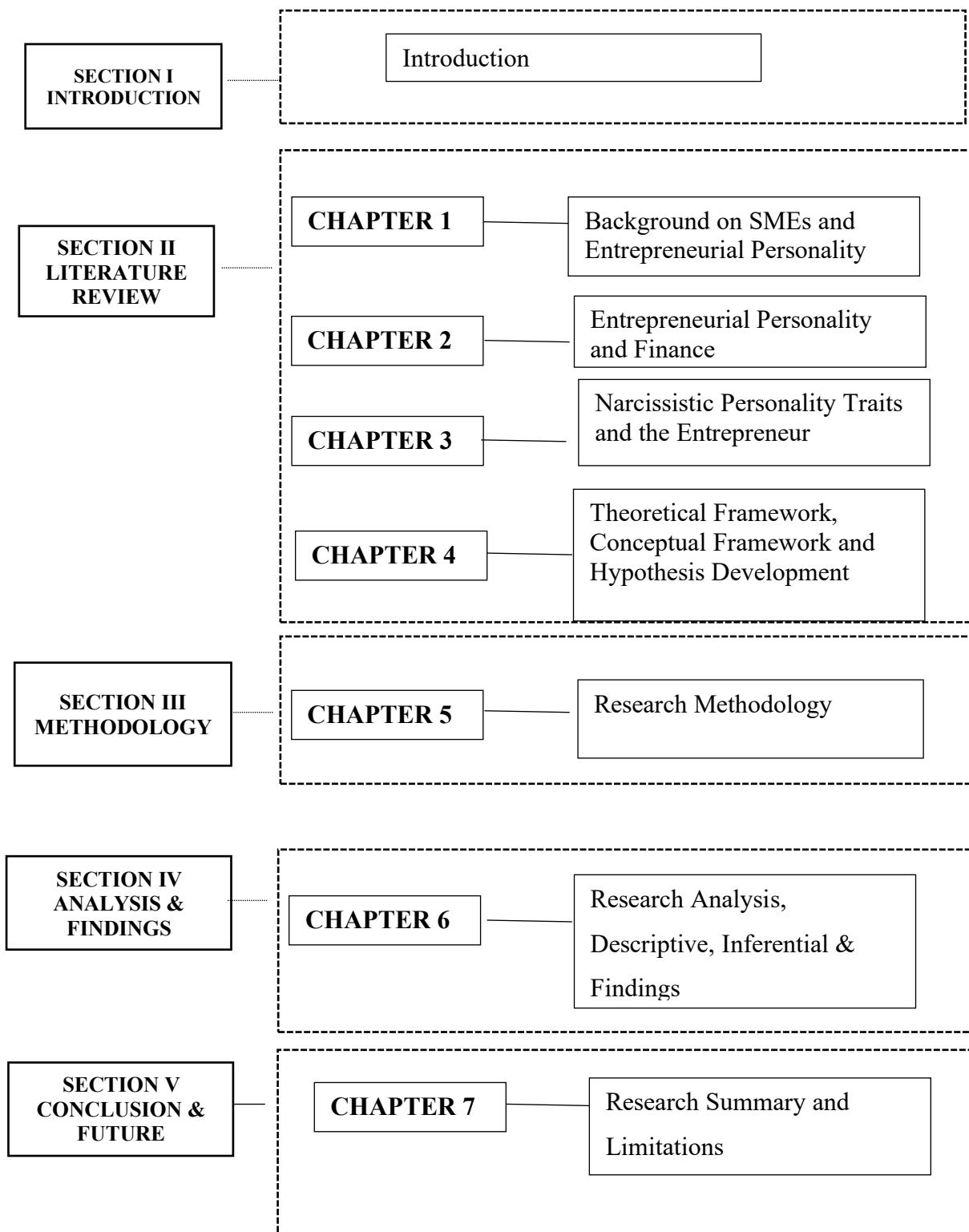
Hypothesis 10 (H10): Null and Alternative

- **H₀₁₀:** Personality traits (narcissism, openness to experience, extraversion) have no significant effect on funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity, business experience, business size and industry).
- **H₁₁₀:** Personality traits (narcissism, openness to experience, extraversion) significantly affect funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity, business experience, business size and industry).

Research Context

The rationale for examining the entrepreneur's personality within the entrepreneurial ecosystem has long been discussed. However, there is a further need to understand the human elements of these dynamics. Understanding the entrepreneur's personality when considering financial decisions is essential. Entrepreneurship contributes to creating jobs, economic growth, and innovation and has also become a tool to challenge social and environmental issues (Harper, 2003). For this reason, numerous studies have explored the motivations, characteristics and intentions behind individuals starting a business, but now the impact of personality on financial resource acquisition, given the modern world of digital businesses with Generation Z entrepreneurs. Understanding personality is essential in understanding narcissistic entrepreneurs and how they run their businesses and obtain funding, which is critical for entrepreneurial finance (Brahmana et al., 2023). The perspective of entrepreneurs has evolved over the years with new generations and the relationship between personality and media. The thesis structure is summarised in Figure 2 below, which outlines the key chapters and structure of the thesis and the key concepts that will be highlighted and discussed in each chapter. Chapter One (1) will now discuss the literature, such as the background of SMEs and the founding theory on personality; it is necessary to examine the foundation of SMEs within the literature and the UK. Chapter two (2) will explore the theories of entrepreneurial personality and finance. Chapter three (3) explores narcissistic personality traits and the entrepreneur theories. Chapter four (4) will examine the conceptual framework and hypothesis development. Chapter five (5) looks at the research methodology. Chapter six (6) will discuss the research analysis and findings of the hypothesis. Chapter seven (7) looks at the research summary, discussion and limitations.

Figure 2: Structure of Thesis

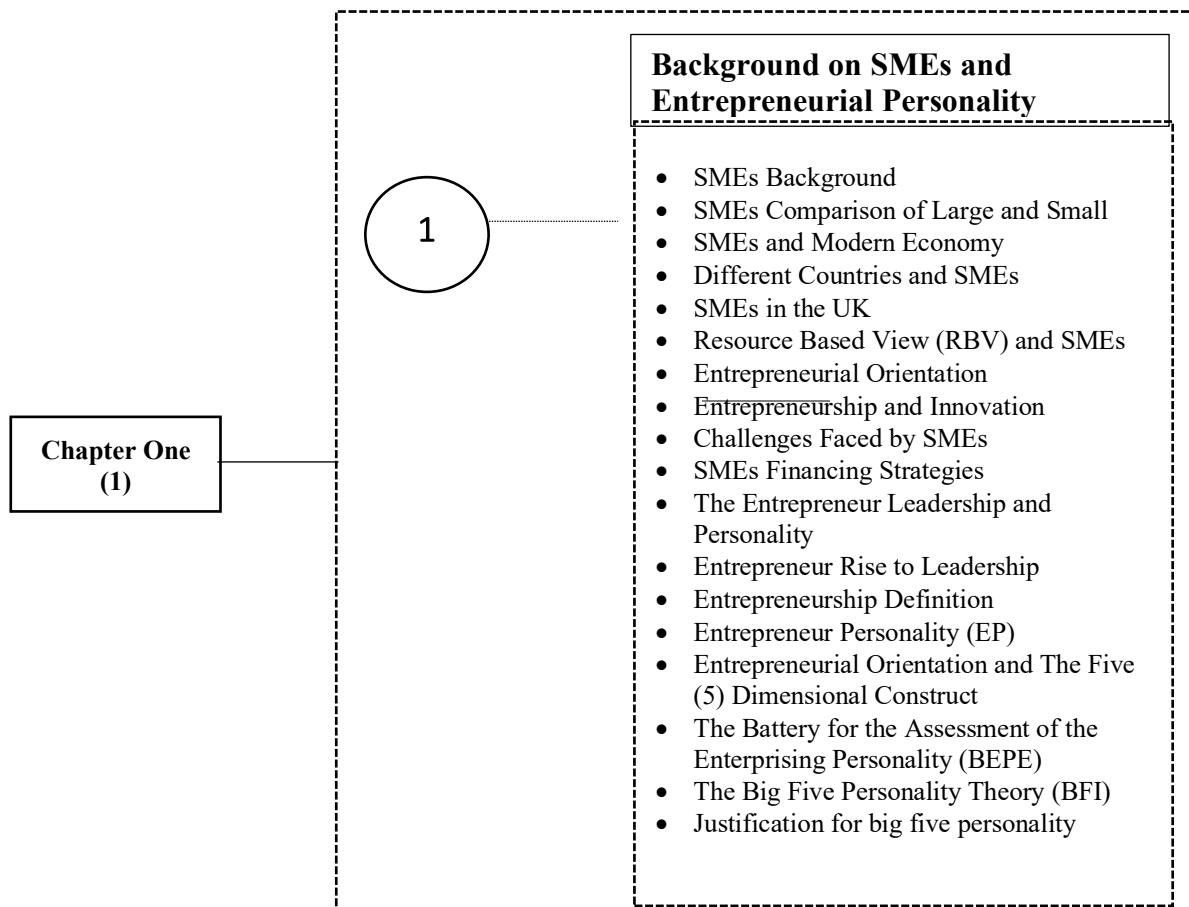


CHAPTER ONE (1): LITERATURE REVIEW BACKGROUND ON SMEs AND ENTREPRENEURIAL PERSONALITY

1.1 Introduction

This chapter examines the background of SMEs by comparing large and small SMEs, different countries, and the founding theories of entrepreneurship, such as the resource-based view, entrepreneurial orientation, and innovation. The chapter also introduces discussions on personality and justification for the theory, including the founding theory of entrepreneurial behaviour and personality, such as the Big Five theory. The introduction discusses the research scope, problem, rationale, questions, aim and objectives, and hypothesis. Chapter one (1) will discuss small-and medium-sized enterprises (SMEs) in a modern economy and their expansion, growth, and performance. The chapter also discusses and explores a comparison of large and small SMEs, in addition to the challenges faced by SMEs. This section will further discuss a comparison of SMEs in various countries across the globe, while also examining the entrepreneur's rise to leadership in SMEs and the entrepreneur's personality. The chapter will also discuss SMEs' challenges faced and explore and examine the foundational theories, such as entrepreneurial orientation and innovation within the entrepreneurial process. The chapter also sets the pace and justification for the use of the Big Five theory in the research. This chapter is summarised in Figure 3.

Figure 3: Structure of Chapter One (1)



1.2 SMEs Background

SMEs contribute significantly to the growth of the world economy in terms of employment, social cohesion, and GDP; thus, it is not surprising that the sector remains of high value and importance to the government and other stakeholders, such as researchers. The World Bank acknowledges the significant role played by SMEs in developing and developed countries in terms of fostering job creation and global economic development (The World Bank, 2021). SMEs represent 90% of businesses and contribute to more than 50% of employment worldwide (The World Bank, 2021). In the United Kingdom, SMEs account for 99.9% of the business population (5.9 million businesses) at the start of 2020 (*Business Population Estimates for the UK and Regions 2020 Statistical Release Html*, 2021). Thus, it is no surprise that politicians, policymakers, and scholars have been concerned with studying entrepreneurship within the context of SMEs (Kale et al., 2019). The presence of entrepreneurship amongst SMEs promotes creativity, better use of resources, identification of opportunities for new products and services, and improvement of those services in SMEs. Larger organisations have now been practising the “entrepreneurial” mindset, which includes balancing risk and rewards (Olaore et al. 2021). According to Drucker (1985), entrepreneurs create new ‘things’, innovate, and enable SMEs to remain ‘agile’ and reactive to exploit new opportunities, often by introducing new products and services. Entrepreneurship is crucial for economic development and drives innovation. To remain at the cutting edge of markets, most SMEs continuously innovate to stay relevant and drive turnover (Beynon et al., 2021). The key driver for SMEs is entrepreneurs' knowledge, which influences the various innovation systems. Therefore, start-up failure is commonly associated with the founder's intention, resources, and personality characteristics.

Personality traits, entrepreneurial intentions and capabilities amongst entrepreneurs promote creativity and innovation, as this helps to generate employment and contribute towards national development (Olaore et al., 2021). The belief that entrepreneurs have unique personalities has long been established in the field of research in entrepreneurship(Gartner, 1989). In the recent decade, scholars in entrepreneurship have acknowledged the critical role of personality traits in entrepreneurial decisions and actions. Therefore, innovativeness amongst SMEs is a multidimensional system that draws upon entrepreneurial orientation and personality traits (Beynon et al., 2021). Recent studies focus on the need to understand personality. Given the persona and close relationship between personality, narcissism and running a business, a better understanding and further research is needed on the dynamics of how narcissistic entrepreneurs receive funding, which is critical to the literature on entrepreneurial finance (Brahmana et al., 2023). Studies have shown that personality, particularly dark traits, affects the selection of financing

options, whether internal or external, amongst entrepreneurs. The study explores the relationship between personality, preference, and actual success with funding.

In recent literature, there has been a discussion of narcissism, particularly among Generation Z entrepreneurs. Narcissism is a personality trait that characterises grandiosity, self-love, and extravagant self-esteem (Badloe et al., 2023). Prior research on narcissism has focused on the tendencies in various settings within business, primarily CEOs within large organisations. Most of the study has primarily been done in the workplace, but recent studies are highlighting the prevalence of narcissism among millennials and Generation Z, who are the current and next entrepreneurs. The narrative in the literature has predominantly narcissism in the workplace, focusing on organisational research. It is essential to carry out further research to examine the role of personality thoroughly, narcissism in the entrepreneurial process, as it concerns resource acquisition and financial decision-making. Their research on this relationship remains underdeveloped; previous studies have explored the Big Five personality traits but have not directly examined resource acquisition (D. Liu et al., 2021a). Narcissism is known for influencing each stage of entrepreneurial activities and outcomes. It is important to discuss the nature and definition of SMs, both large and small. The following section will discuss the comparison between large and small.

1.3 SMEs- Comparison of Large and Small

Large and Small enterprises differ based on many factors, but the most common and acceptable definition is based on considering the number of employees. SMEs are defined differently internationally due to substantial regional differences (Madani, 2018). The literature discusses primarily the different ways in which SMEs can be defined. The literature highlights the close relationship between the owner and the company and the aspects of independence. The quantity approach defines SMEs, as it has become more common within the EU definition of SMEs and has prevailed in the literature(Durst et al., 2024).The definition looks at three criteria: annual turnover, staff headcount, and annual balance sheet. This determines the category of SMEs, as well as micro, small, and medium-sized enterprises, which employ fewer than 250 persons.

The European Commission, OECD, and World Bank have their respective definitions of SMEs. The main difference between their definitions is that the European Commission and the World Bank limit the number of employees, turnover, and the balance sheet. At the same time, the OECD only defines SMEs based on the number of employees and does not have turnover and balance sheet value criteria (Madani, 2018). In Britain, small-scale business is defined as industries with an annual turnover of two (2) million pounds less than 200 paid

employees; however, they are classified based on the type of industry and the number of paid employees (Adebisi et al., 2015). The UK definition of SMEs is any business with fewer than 250 employees (Ward, 2021). The following table (Figure 3) represents the classification of the business size of SMEs in the UK. SMEs are classified based on the number of employees: micro (0-9), Small (10-49), and medium (50-249).

Figure 3 Estimated number of businesses in the UK private sector and their associated employment and turnover, by business size, start of 2023.

	Businesses	Employment	Turnover
	Thousands	£ Millions	
All businesses	5,555,130	27,524	4,479,552
SMEs (0 to 249 employees)	5,547,170	16,715	2,355,421
Small businesses (0-49 employees)	5,510,265	13,119	1,592,473
With no employees	4,110,145	4,485	330,789
All employers	1,444,985	23,039	4,148,763
Of which:			
Micro - 1 to 9 employees	1,177,335	4,288	592,131
Small - 10 to 49 employees	222,785	4,346	669,553
Medium - 50 to 249 employees	36,905	3,596	762,947
Large - 250 or more employees	7,960	10,809	2,124,131

Source: (Department for Business & Trade-UK, 2023)

In the United States, the Small Business Administration (SBA) regulates the definition of SMEs, a function of ownership structure, income, the number of employees, and the economic activities sector. This means one sector can have more employees than another sector. Therefore, there is no standard definition for the number of employees in the United States; this is similar for Canada. In Japan, the definition of SMEs depends not only on the sector of activity but also on the value of the capital and the number of employees. (Madani, 2018).

1.4 SMEs and Modern Economy

In today's dynamic and global world, financial, economic, and social systems are undergoing profound changes caused by many factors. Technological advances, geographical

shifts, and demographic and environmental changes include these factors. The current landscape of the global economy was impacted by a new phenomenon known as a world pandemic, COVID-19, which has also seen a rise in digital entrepreneurship. This international health matter within the external environment has impacted humans' survival, economic structures, connectivity within and across economies, and how economies and organisations, such as SMEs and multinational firms, operate. The pandemic has given rise to challenges for many SMEs (Juergensen et al. 2020).

Business leaders, entrepreneurs, and governments in developed and emerging economies; within this context, the leadership of SMEs has gained greater importance globally rather than within a single region. The impact of the pandemic has imposed greater responsibilities and challenges on business leaders at large and, more specifically, amongst SMEs, as they are under a more significant distress period. These distresses include reduced revenue and closing operations due to limited customer demands, depending on their Industry. SME Business leaders' agility was tested within the last four years; they had to make quick decisions to respond to changes to survive or lessen the impact of COVID-19 on their operations. It has been reported that many SMEs failed, especially those established in 2019 at the onset of the pandemic (Shpilkina et al., 2021).

Business leaders' decisions during the pandemic are entrepreneurial decisions that require them to think and act quickly. The pandemic requires leaders to reflect on business opportunities, threats, and new markets and deal with uncertainty. Crisis management within uncertainty requires a rapid response, deliberation of decisions, and a thought process for quick decisions; an entrepreneur's personality is crucial (Fasth et al., 2021). Crisis management is usually a very unexpected, dramatic, and unprecedented event that forces organisations and their leaders to respond to chaos. In some cases, unmanaged chaos destroys enterprises (Alkhawlani et al., 2019). Such unexpected events demand a 'high level' response to think beyond the crisis, which again is fabricated on the entrepreneur's personality. Thus, in times of crisis such as the COVID-19 pandemic, influential leaders have a higher ability and are considered valuable assets in making crucial management decisions to reduce concerns among employees, customers, and broader stakeholders. To mitigate the crisis, maintaining business and entrepreneurial leadership is considered to carry high value, often costly. However, leadership and personality among SMEs tend to vary, with varying skills, knowledge, and abilities to respond to crises. For SMEs and larger firms, surviving and operating during a crisis is challenging, but reacting in a lean, modern, and unprecedented economy is incredibly difficult (Alkhawlani et al., 2019).

Within recent times, for SMEs to achieve growth and enhance performance through product and service innovation, personality is a crucial asset as it is essential in shaping relationships amongst stakeholders, both within and externally. This calls for a responsive, confident, assertive and articulate leader who can respond to internal and external challenges. During these crises, personality traits such as narcissism, openness to experience, and extraversion are productive during complex challenges. Thus, this calls for a closer examination of the entrepreneur's personality at large and for enterprises such as SMEs, which tend to operate at the margins of risk and uncertainty (Gashema, 2021). It has been suggested that the personality best suited for entrepreneurship may require qualities such as inspiration and vision. Leader behaviour is crucial to the organisational context of innovative behaviour.

(Gashema, 2021). Within the literature, personality traits are distinguished to offer greater transparency in their capabilities to manage change, transform operations, identify new opportunities and respond to changes; they are often referred to as transformers. These transformative leaders are known for engaging more with corporate social responsibility (CSR) (Amos, 2017). Transformational leaders motivate, plan, and use institutional CSR for competitiveness. This is also known for driving employees to organisational change. This makes CSR a significant consideration for SMEs within a modern economy to differentiate and remain competitive.

Technological activities are currently a fundamental and economic occurrence of our time. Digital transformation is considered the multifactor impact of digital technology on SMEs and is prevalent in all operational aspects of SMEs (Ziółkowska, 2021). SME business entrepreneurs are standing up to the challenges and using diverse marketing communication, social media tools, and artificial intelligence to include in their strategies to maintain sustainable growth (Ziółkowska, 2021). Digital marketing is considered to achieve marketing objectives through various digital technologies and media (Shpak et al., 2020). SME entrepreneurs must adapt to digital evolution if they want their organisations to survive in the rapidly changing global market (Ziółkowska, 2021). Adapting technology has benefits such as driving down costs and improving business processes, and can revolutionise modern organisations (Shpak et al., 2020). Literature suggests that managerial and entrepreneurial capabilities should foster successful strategic changes, such as digital transformation, which leads to increased financial performance (Shpak et al., 2020). In the modern world, where SMEs operate, new technology evaluation is essential for entrepreneurs to consider in their strategic planning and implementation. Technological evolution is a continuous process from

one generation to the next. Based on various challenges and changes in the modern economy, the ability and agility of SME leaders remain crucial during the multiple changes and phenomena. SME entrepreneurs' personality traits are a common factor in change management that enables the organisation to move forward and drive growth, innovation, and performance while dealing with rapid changes. These changes discussed include crisis management, adapting technology and digital marketing, and maintaining a social responsibility to the external stakeholders.

1.5 Different Countries and SMEs

The answer to the question "Why do firms grow more than others?" has gained much interest among researchers and policymakers for decades in various regions. Policymakers are interested in this topic because it increases job availability, innovations, local development, and industry revitalisation (Federico et al. 2012). Firstly, this section will discuss SMEs in emerging regions such as Latin America and the Caribbean; secondly, Southeast Asia, a developed (formerly emerging) region; and thirdly, European countries. Market characteristics also indicate, to some degree, the type of resources SMEs have available to them that may impact their growth perspective. This means more demanding markets affect firm survival negatively, but may impact growth positively for those firms that may survive (Federico et al. 2012). Previous research affirms that market characteristics affect venture growth perspectives (Chrisman et al., 1998). Therefore, it is relevant to examine various market conditions worldwide and the impact of unique market conditions in different regions.

Research shows that in Latin America and the Caribbean, transaction costs are high when acquiring capital. SMEs must use entrepreneurs' external networks to overcome challenges, which is also a factor in their personality traits and social networks (Federico et al. 2012). Most Latin American and Caribbean countries have faced many challenges due to marginal changes in production and export structures. This is due to limited investments in science, technology, innovation, and education. There is also the challenge of the significant disparity between SMEs and large firms regarding export and productivity (Herreros et al., 2018). Caribbean countries have a low scope of coverage for technology and infrastructure, coupled with a lack of resources and existing limitations on investing in the needed resources and structures (Mendoza, 2020).

SMEs are the backbone of the Asian economy; they make up more than 96% of all Asian businesses. Therefore, Asian economies need a fully functioning support measure for SMEs. Small firms, however, face significant challenges in accessing finance due to

difficulties in the supply and demand of funds based on high transaction costs (Yoshino et al., 2018). For the Asian community, 70 % of Indian, 80% of Chinese and 90% of Malaysian financial systems are bank loans (Yoshino et al., 2015). The business-related environment in Eastern Asia makes it difficult for SMEs to grow and remains an obstacle. Improvement in access to finance and land and reforms in taxation administration, licensing, permits, and customs could advance the performance of private firms in Asia (Gogokhia et al., 2020).

1.6 SMEs in the UK

The challenges SMEs face significantly influence the UK economy. Therefore, this has received much attention from UK scholars, academics, government, and policymakers. As mentioned earlier, SMEs play a significant role in the UK's economic development (Hughes, 1997). One of the primary challenges faced by SMEs is access to finance; however, historically, policymakers have developed initiatives and plans to support the sector. In the 1980s, there was a Loan Guarantee Scheme (LGS), which was introduced alongside the Business Expansion Scheme (BES) (Hughes, 1997). This funding was introduced to address the debt and equity challenges of the SME financing problem. Other schemes were later introduced to support high-tech and innovative businesses; this was followed by other developments, such as the Enterprise Investment Scheme and Venture Capital Trusts, to boost finance for investment in SMEs.

There was also an increase in private venture capital funding to support the growth of SMEs within the UK. SMEs continue to rely heavily on short-term financing from banks. Other developments in the 1980s led to the emergence of new questions in the debate over small business finance. One of the critical debates was the increase in new ethnic businesses, notably those run and owned by members of the Asian community; this led to many debates around the strengths and weaknesses of the community to raise funding, with cultural stereotyping, lack of established track records, racial discrimination, and informal solid networks. Additionally, in the 1980s, there was a high cost relating to the company compliance audit and disclosure requirements for small firms compared with their more significant counterparts(Hughes, 1997). Larger firms within the UK rely heavily on financing options like bank finance. Smaller firms are characterised by a relatively greater reliance on overdrafts and short-term loans and a much smaller reliance on equity finance than larger firms. Scholars have done a significant amount of research into the access to finance for SMEs, and over the last decade, the narrative has included examining personality traits such as the big five theory and narcissism. Many growing interdisciplinary studies aim to understand management by building the resource-based view (RBV) by exploring the

relationship between the entrepreneur's personality within a start-up. Research has looked at the big five personality influences on entrepreneurs' resilience. RBV supports that the firm's internal resources and capabilities are the main drivers of competitive advantage (Branca et al., 2025).

1.7 Resource-Based View (RBV)

The resource-based view (RBV) discusses organisations' resources as the primary drivers of superior enterprise performance; this means SME resources yield significant returns when they are rare, valuable, non-substitutable and imperfectly imitable (Al Mamun et al., 2018). The capabilities discussed by RBV are required to execute certain activities or tasks, which require human, physical, and technological resources (Grant, 1991). As the personality traits of entrepreneurs are their social capital abilities and can be considered valuable resources, it can be noted that entrepreneurial personality and related capabilities (responsibility, accountability, analytical thinking and emotional intelligence) are individualistic, specific (rare, valuable, non-substitutable and imperfectly imitable) and may have an impact on SME performance and sustainability (Barney, 1991). The literature on RBV is the foundation of the discussion, and the literature will further expand on the impact of the different dimensions of the entrepreneur's personality traits and competencies.

One primary comparison between large and small firms is how they decide between risk and benefits. Knowledge of the trade-off between benefits and risk and how this differs among small and large firms is limited (Chiambaretto et al., 2020). One of the main concerns is liabilities relating to the size of SMEs and the risk they may take; the lack of such liabilities implies that small firms lack the necessary resources and skills that are urgent to compete within their industry (Chiambaretto et al., 2020). There has been an increasing interest in financial analysis, distinguishing between large, small, and medium-sized firms. Capital structure is also a significant difference between large and small firms; firm size is negatively related to the proportion of debt firms use (Mkhaiber et al., 2021). Small and micro businesses are known for facing challenges and numerous barriers to growth due to the lack of access to capital (Pissarides, 1999). Many entrepreneurs prefer bank financing over venture capital financing to retain complete business control (Mkhaiber et al., 2021). There is a need to explore further how small firms are similar and different from large firms using the resource-based view (RBV) through the lens of innovation. This theory has been extended to include firm size effects on innovation. Empirical work has found that innovation in small and large firms differs significantly (Davis et al., 2021). The entrepreneur's personality traits are essential to a small firm's innovation (SFI). Scholars have drawn attention to factors that

impact SFI innovation, such as networking, market structure, and proactive entrepreneurial personality, and how SFI leads to growth and increased performance via the RBV perspective (Davis et al., 2021). The theoretical implications extend to the scope of RBV to include individual-level traits and cognitive aspects of the entrepreneurs by understanding their personalities.

1.8 Entrepreneurial Orientation

One of the foundational theories for the study is the “Resource-Based View” (RBV), which Barney developed in 1991. This theory considers resources as internal assets of the organisation and enhances the firm's competitiveness and performance.(Barney ,1991). The theory describes the firm's internal resources, such as financial assets, intangible assets, and organisational and human resources, and how SMEs must utilise these to enhance performance innovatively (Iqbal et al., 2021).The resource-based View (RBV), developed by Barney in 1991, discusses resources as internal components that enhance SMEs' performance and competitiveness. Previous research has indicated that RBV is significantly related to entrepreneurial orientation, innovation, and abilities to identify novel ideas, risk-taking, and proactive skills, enhancing SMEs' performance and growth. (Iqbal et al., 2021). Thus, the entrepreneur's personality is also a 'resource' that draws on the RBV theory to close the loop. Personality has a significant role in adapting entrepreneurial orientation characteristics as they influence the propensity to innovate, process new information sets, and react to market changes that affect the performance of SMEs. Thus, drawing on literature, it is established that the characteristics and personalities of entrepreneurs are closely linked to a firm's propensity to respond to changes. The traits of an entrepreneur include inspirational motivation, intellectual stimulation, and individual considerations (Iqbal et al., 2021). Leaders' and employees' commitment converge, contributing to the organisation's goals of wealth maximisation. Entrepreneurial Orientation (innovativeness, proactiveness, and risk-taking) is the critical source of intangible goodwill for organisations to sustain a competitive advantage, especially in a highly competitive environment. Entrepreneurial orientation has emerged as an area of academic research. (Kowo et al., 2021). Entrepreneurial orientation refers to the various procedures, policies, methods, actions, and decision-making strategies and practices within an organisation and supports entrepreneurial decisions in SMEs (Iqbal et al., 2021). Entrepreneurs serve as the mediating role through blending organisations and the entrepreneurial orientation that promotes innovation and enhances the performance of SMEs (Iqbal et al., 2021). Thus, organisational commitment is the mediator between entrepreneurial orientation and innovation performance.

The literature established that entrepreneurial orientation and the Big Five personalities might influence the start-up resource acquisition process. Therefore, the literature establishes a baseline link

between personality and entrepreneurial orientation. To enhance the innovative performance of their firms (Iqbal et al., 2021). Personality traits within this context are a resource that helps to explore the interconnecting mechanism that links SMEs, entrepreneurship, and personality (Freixanet et al., 2021). Entrepreneurial orientation is essential for SMEs to ensure their survival. It is one of the most critical elements of a firm's performance, growth, and profitability. Growth can be aligned with proactiveness, innovativeness, autonomy and risk-taking, and competitive aggressiveness in their industry, as they face fierce competition from big players (Iqbal et al., 2021). Few studies have examined the role of personality in moderating the correlation between entrepreneurial orientation and performance effectiveness. Therefore, entrepreneurship, knowledge, personality traits, and capabilities are considered resources fundamental to SMEs' competitive advantage and growth during the innovation process.

1.9 Entrepreneurship and Innovation

According to Troit (2015), entrepreneurship can be described as a process of action that an entrepreneur may undertake to establish an enterprise. Entrepreneurship includes much creative activity and building something from practically nothing. Entrepreneurs can see an opportunity where others see chaos, contradiction, and confusion; entrepreneurship is an attitude and an individual who seeks opportunities and takes a calculated risk to set up a venture. According to Trott et al. (2015), it includes numerous activities such as idea concept, creation and running of an enterprise. The definition of an entrepreneur is like that of entrepreneurship; the entrepreneur starts such an enterprise through a search for change and responding to others, then considered an innovator. Entrepreneurialism is coming up with new ideas for products and markets. The entrepreneur perceives an opportunity and organises and coordinates the resources needed for exploiting opportunities. Peter Drucker's classic book on innovation and entrepreneurship was published in 1985 and, at the time, was the first to address entrepreneurship and Innovation as a purposeful and meaningful activity. According to (Drucker et al., 1985), innovation is the specific function of entrepreneurship. Entrepreneurship is a new wealth-producing or wealth-creating potential resource (Enhanced et al., 2015). Howard Stevenson, who developed entrepreneurship teaching at Harvard Business School, defines entrepreneurship as pursuing an opportunity beyond the resources you currently control (Stevenson et al., 1990).

The European Commission encourages open innovation by creating dynamic knowledge circulation and translating knowledge into socio-economic value (EC, 2016). Innovation in SMEs represents a strategic approach in the EU innovation policy; this is the fourth coming horizon for Europe and the ninth framework program for Research and

Innovation for 2021-2028 (De Marco et al. 2020). Comparative research was conducted between large enterprises and SMEs, identifying the gap between financial leverage and long-term investment capacity (Grube et al. 2019). Many have described entrepreneurship as innovative, flexible, dynamic, risk-taking, creative, and growth-oriented. The literature has also defined entrepreneurship as starting and operating new ventures. Many scholars have reinforced that entrepreneurship is not just about starting a new concept by developing products, processes, and services; it involves innovation management.

The innovation management method has not been widely studied; this is changing as entrepreneurship is a rapidly growing subject in universities across Europe. Entrepreneurs' desire to change things makes their role crucial in Innovation (Trott et al., 2015). Trott (2015) argues that the principles associated with entrepreneurship, such as growth, flexibility, and creativity, are desirable traits for Innovation. In 1848, the famous philosopher and economist John Stuart Mill described entrepreneurship as the founding of a private enterprise, which involved risk-taking decisions, the individuals who desire through the management of limited resources to create new business ventures. Innovation is a common dimension of entrepreneurial personality that includes the ability to innovate and remain creative (Howard et al., 2024). Personality traits have long had an impact on the decision-making process of CEOs and are predictors of the success of innovation in SMEs (Hasso, 2013).

1.10 Challenges Faced by SMEs

Due to the size and nature of SMEs, they face several challenges, as the firm has fewer resources to control, which makes it vulnerable to internal and external events (Eggers, 2020). Despite the operation of SMEs across various countries facing different macroeconomic external challenges, the literature review highlighted and analysed further common challenges faced by SMEs compared to larger enterprises (Meddour et al., 2020). The following challenges were highlighted for further discussion in the research: personality and human resource capabilities, limited financial resources, lack of infrastructure, and lack of technology implementation. Alongside the challenges, there are internal assets that support the growth process in SMEs. These are embedded in the organisation's resources, such as finance, intellectual property, capital, traits and capabilities (Salder et al., 2020). These internal resources are considered internal resources and capabilities dynamically evolving through transformation and internal firm experience levels to achieve competitive advantages (Clarysse et al., 2004). Globalisation has also contributed to some of the challenges faced by small firms. Before discussing the challenges, the usual strengths of SMEs include flexibility, entrepreneurial dynamism, efficiency, and quick decision-making. At the same time, larger

firms have the advantage of economies of scale, scope, marketing skills, and financial and technological resources, which are the limitations of SMEs (Paul, 2020). This section will discuss the findings of the literature review study and organise the challenges into six (6) primary challenges: access to finance, human capital development, market access, infrastructure, innovation and technology adaptation, and the legal and regulatory environment (Khusna Mustafa et al., 2018). Entrepreneurs face many challenges as they aspire to grow their ventures, and this involves the personality and perspective of the entrepreneur. Each SMEs and entrepreneur face different needs and challenges.

Access to finance is another significant challenge SMEs face and a critical key determinant for business start-up, development, and growth; this is particularly important for innovative SMEs. These challenges include a lack of management skills, limited market power, absence of adequate accounting records and insufficient assets, transaction costs, and lack of collateral, increasing SMEs' risk profile. The risk profile of SMEs makes it challenging to access finance through traditional means (Vasilescu, 2014). Compared to larger firms, SMEs face a lack of access to finance for the following reasons: weaker financial structures or lower capitalisation, less diversified activities, lower or no credit ratings, heavy dependence on credit, and lower options for finance. Lack of access to finance, coupled with challenges such as poor management, destructive narcissistic personalities, and lack of accounting practices, contributes to the ability of SMEs to access loans and equity funding from formal banks (Adebisi et al. 2015).

Past research has found a positive relationship between innovation and technology, and performance (Rosli et al., 2013). This means that if SMEs do not adopt innovation and technology, company performance has a negative impact. Dynamic capabilities theory is an extension of the resources-based view theory (RBV). It is used to discuss competitive advantage in unpredictable circumstances as it extends market dynamism (Eisenhardt et al., 2000). Dynamism capabilities are defined as the firm's capacity to innovate, adapt, create positive change for customers, and challenge competitors (Teece et al., 2016). Another challenge that limits innovation for SMEs is the lack of investment in research and development. Researchers discuss three challenges to innovation, which are financial, environmental, and human resources, which must be addressed to increase SME performance (Khusna et al., 2018). Entrepreneurs' perception of innovation is influenced negatively by inadequate funds from their resources and the high cost of innovation. This limits access to global markets (Khusna et al., 2018).

SMEs encounter challenges that may influence their entry into global markets. Their focus should be on producing superior-quality goods and services, addressing customers' needs and wants, and meeting them better than their competitors (Osano, 2019). Manufacturing SMEs particularly face unique challenges, such as low innovation and product development influenced by their inability to access domestic and international markets, affordable credit, and the length of quality standards and certification (Osano, 2019). Many researchers have found that some of the key factors that impede global expansion or internationalisation by SMEs are lack of entrepreneurial and technical skills, insufficient management and commercial know-how, language and cultural awareness, lack of adequate equipment and facilities, limited access to information on markets, opportunities, threats, regulations, and laws, restricted access to innovative production processes and technology, limited access to finance and trade finance support (Hall,2003).

Human Capital Development looks at a firm's human capital, the most important source of sustained competitive advantage (Barney, 1991). This is particularly applicable to firms that operate in complex and dynamic competitive environments, where the capability to acquire and adjust to new markets and technological capabilities quickly is the key advantage (Hayton, 2003). Human capital management is an essential tool for SMEs, and it is also a requirement to leverage their human capital and enhance their entrepreneurial performance. Innovation and risk-taking are part of entrepreneurial performance, and the firm's human resource management system contributes significantly to such activity (Morris, 1998). Therefore, human capital management is a dynamic capability considered a strategic resource based on the RBV theory (Barney, 1991).

SMEs pursuing innovation should choose HRM practices that promote learning, collaboration, experimentation, and risk-taking (Hayton, 2003). Investment in human capital positively impacts the supply of entrepreneurial activity and technology innovation (Odekunle, 2001). The challenges of SMEs span from discussions as far back as 1970 and how to assist organisations in developing their human resource (Walton, 1999). The following are some critical challenges faced by SMEs in human capital development. Evidence has shown that SMEs provide less formal training than their larger counterparts (Patton, 2005). Many SMEs do not have guidelines on governing training and development programs; this means there exists minimal to no training budget and responsibility for development (Chidi, 2011). SMEs face challenges due to insufficient infrastructure; SMEs may lack productivity and efficiency. Empirical evidence shows that the introduction of e-commerce has been discussed recently and assists in conducting business smoothly and efficiently in conducting

business without face-to-face interaction. Several developed countries have recently achieved a digital economy, which enhances the number of business transactions done electronically (Senadjki et al., 2020). One of the critical infrastructures that has gained much attention from researchers is information, communication, and technology (ICT) infrastructure. This has become a new strategy for competition and an effective one for achieving competitive advantages (Davenport et al., 1994). The construction of networks and infrastructure, such as broadband towers, network cables, telecommunication services, and information, is essential to support the competitiveness of SMEs (Benny et al., 2020).

The Legal and Regulatory Environment includes the effects of regulation on SMEs, which have garnered significant political attention internationally. Regulation is usually seen as a threat and burden to SMEs. Several institutions influence SMEs, including regulation and policymakers (Edwards et al., 2006). The cost of regulation is argued to be a burden on entrepreneurs and to reduce the number of starts and the rate of business growth (Mallett et al., 2019). There are various views on the effect of regulation on SME growth. Regulations are rules and routines that may influence the form, not the quantity of start-up and enterprise growth (Capelleras et al., 2008). This was observed in a low regulatory environment compared to a highly regulated environment; the latter encourages businesses to remain unregistered and does not influence the number of companies and employment (Van Stel et al., 2007). Regulations provide a set of rules and routines (Van Stel et al., 2007), that influence the form but not the number of start-ups and enterprise growth (Capelleras et al., 2008). Provide compelling support for this argument through an empirical comparison between relatively low-regulation England and high-regulation Spain. They found that the latter might encourage more businesses to remain unregistered but does not significantly affect the overall quantity of business start-ups or employment growth. The costs of regulation burden entrepreneurs and reduce the number of start-ups and the rate of business growth. Evidence supports creating a low-regulation economy, which continues to be promoted by influential organisations such as the European Union. The effects of regulations on small and medium-sized enterprises (SMEs) have garnered significant political attention internationally.

Skills shortage is one of the challenges faced by SMEs. To survive in a globalised market, SMEs must embrace innovation to maintain their competitive edge; therefore, due to their size, investing in innovation is very costly. SMEs also encounter various external and internal resource constraints (Halim et al., 2020). As discussed earlier, SMEs usually face certain restrictions; these include a lack of capital, difficulties procuring raw materials, a lack of access to relevant business information, low technological capabilities, and bureaucratic

procedures, policies, and regulations. Despite these challenges, SMEs demonstrate a unique relationship with innovation and performance (Hashi et al., 2013). Entrepreneurial bricolage is a concept that examines innovation in which firms use existing resources to create innovative solutions. The idea of bricolage can explain many activities of SMEs that create something from nothing by using inputs ignored by other firms; this is described as bricolage behaviour (Hashi et al., 2013). The bricolage concept explains the shortage of skills and resources in an SME environment. The entrepreneur has three options: seek external resources, avoid challenges by downsized, and embrace bricolage by adjusting to the available resources to deal with new problems and opportunities. Therefore, SMEs may embrace entrepreneurial bricolage in these environments to overcome constraints (Mishra et al., 2014).

1.11 The Entrepreneur Leadership and Personality

This chapter will further evaluate the entrepreneur's leadership and personality in the context of SMEs. Entrepreneurs play a critical role as leaders in SME businesses; this is relevant to setting the research context and foundation. The SME entrepreneur is the enterprise's leader and is at the research critical focal point. The theory will also discuss the evolution of entrepreneurship and its rise to leadership in SMEs. Leadership plays a vital role in entrepreneurship and SMEs. Entrepreneurs in SMEs are the primary leaders and decision-makers. This chapter discusses the context of leadership in SMEs, discusses the entrepreneur's rise to leadership, and then examines the theoretical framework of personality. The chapter also discusses personality theory, examining the five prominent personalities and the entrepreneur, and discusses leadership and the corporate environment to compare with entrepreneurs in SMEs.

Leaders are ultimately responsible for the entities that they lead; within entrepreneurship and SMEs, this is no different. The entrepreneur is the prominent leader and visionary of the business. Before the discussion on leadership and SMEs, the definition must be presented in the context. Leadership is a formal or informal context-rooted and goal-influencing process that occurs between leaders and a follower, groups of followers in formal and informal institutions; the science of leadership is a systematic study of its outcome; their process depends on the leaders' traits and behaviours, observer inferences about the leader's characteristics and observers' attribution made regarding the outcome of the entity being led. (Antonakis et al., 2018). The study of leadership recognises the leader's attributes but also considers the followers' perception. Leadership is achieving a particular objective through managing human and organisational resources by coordinating these resources towards a specific outcome to solve a complex problem. This includes the entrepreneurs' characteristics and personalities, and how they support the entrepreneurial process in managing and making

resource decisions. In defining what is considered leadership, there must also be a discussion on previous work and scholars' discussions, on what is not considered leadership as it relates to power and management. Some leadership debates usually confuse these two principles. Power means that the leaders potentially must influence others and can be defined as "having the discretion and the means to enforce one's will over entities" (Sturm et al., 2015).

The importance of discussing leadership will be examined as the foundation for later discussions on the entrepreneur's personality. On a strategic level, leadership is required to direct and guide the organisational and human resources towards strategic objectives and to ensure that the SME functions are aligned with the external environment (Zaccaro et al., 2003). Personality has been focused on research analysis, including the Big Five theory theoretical framework and leadership, including components: openness to experience, conscientiousness, extraversion, agreeableness, and emotional stability. Leadership is a widespread research area that has gained the interest of several scholars, particularly with increased growth in start-ups and SMEs, technological developments, and changes in processes and organisational structures. SMEs can achieve excellent business success once the leader has a clear vision and is supported by entrepreneurial actions (Sawaean et al., 2020). A dynamic and competitive business environment in which SMEs operate requires leaders who can encourage creativity and innovation to complete and possess the 'entrepreneurial leadership spirit' (Gupta et al., 2004).

Many entrepreneurs start a company by focusing mainly on innovation, which creates a market offer to attract their first customers. When the entrepreneur makes its first sale and the dynamics of growth change, many challenges are faced within the market (Schreuders et al., 2012). To survive, SME leaders must balance meeting customers' needs and developing new products and services with market demands and changes. Suppose the entrepreneur leader fails to do this properly by balancing the need for new product development and the need to satisfy and keep existing customers. In that case, the following outcomes may happen. The SME technology firm may no longer be able to innovate at the speed required to stay ahead of its competitors. The SME technology firm may develop a poor reputation, resulting in unhappy customers who may eventually go to the competitors (Schreuders et al., 2012).

Past studies have described the implication that personality traits are one of the most common psychological theories used to explain and predict human behaviour, including entrepreneurship and leadership (Mushtaq Ahmad, 2010). In a recent study, entrepreneur leaders and CEOs scored higher on risk-taking (Mushtaq Ahmad, 2010). The literature has

referred to a similar personality between leaders and entrepreneurs, who may both score high in risk-taking. In contrast, those with high scores in the leadership dimension take a middle course through vision and culture orientation and carefully search for a balanced portfolio of innovation opportunities (Raisch et al., 2009). Balancing managerial, entrepreneurial and leadership effectiveness optimises SMEs' capability to incorporate customers' inputs, leading to more innovation, technology, and product development (Raisch et al., 2009).

In a turbulent environment where SMEs operate, sustainable competitive performance is widely dependent on leadership and strategy. Many scholars have examined the relationship between strategy, leadership, and growth in SMEs. However, there is a need for further work around the impact of personality and its relationship to access to finance to influence the finance strategies within SMEs (Ghobadian et al., 2004). Studies have found that strategy positively influences the growth of SMEs, and personality, leadership and financing strategies have an essential role in the strategic effectiveness of driving growth (Schwenk et al., 1993). The literature discusses that deploying and executing a strategy without leadership involvement is challenging (Ghobadian et al., 2004). As discussed in an earlier section, entrepreneurial leadership and personality in SMEs is responsible for communicating and executing the strategy, and financial strategies are essential in driving growth in SMEs. This leaves one important question to be discussed in the entrepreneurship theory: How do the SME entrepreneurs' personality and narcissism influence the financing strategies in accessing capital to drive growth in their enterprise?

Research is on SMEs' leadership style, strategy, and growth performance. However, there is a need for further work on how entrepreneurs' leadership styles and personalities influence access to capital, which poses a significant challenge for start-up SMEs to experience the level of success through performance and growth. To date, most research has focused on the survival of SMEs by examining the financing strategies and access to capital, rather than focusing on a greater understanding of the growth process to sustain the SMEs in the growth stage (Ghobadian et al., 2004). This entails a further analysis of the entrepreneur leader's personality and its influence on the financing strategies. The personality of the SME leadership may influence how they access and make decisions regarding finance in SMEs. Strategy varies from large firms with a formal strategy; SMEs must make the best use of resources available, as previously discussed in the RBV model. This is one of the critical differences between SMEs and large firms as they face resource constraints. Therefore, SMEs must focus on their internal resources; the entrepreneur leader and finance are the keys to success.

The previous sections have outlined the context of entrepreneur leadership, personality and finance in SMEs. SME management is highly dependent on entrepreneurial leadership and personality because these are keys to success in the company. Many researchers have studied the success of SMES by evaluating human capital resources and financial capital. Still, limited research on the relationship between the two focuses on the entrepreneur leader. Leadership is the leading resource for successful change (Kautsar et al., 2019). Previous studies on innovativeness, proactiveness, and resource allocation (RBV) have shown that these are the most critical components of entrepreneurial leadership that significantly impact SMEs and their ability to acquire finance and improve performance (Harrison et al., 2013). As discussed in the previous section, entrepreneurial leadership influences others to strategically manage scarce resources and potential opportunities and establish profit-seeking behaviour (Covin et al., 1991). According to Goosen (2007), entrepreneurial leadership create a culture of developing entrepreneurship. According to Winardi (2003), entrepreneurial leadership is when an entrepreneur carries out innovative experiments and has skills that support the transformation to attractive possibilities. The literature shows eight (8) entrepreneurial leadership characteristics: Self-efficacy, Ability to motivate, achievement-oriented, Creative, Flexible, Patient, Persistent, risk-taker, and visionary.

Entrepreneurs are considered to have high self-efficacy, which is defined as the ability to accomplish specific tasks. Leaders with high levels of self-efficacy will fight whatever challenges arise and are highly likely to succeed in finding solutions to challenges (Kautsar et al., 2019). Self-efficacy is the belief that an individual can achieve the desired outcome; the perception of self-efficacy is reflected in the entrepreneur's optimism and ability to succeed. Individuals with high self-efficacy believe they can accomplish complex tasks and overcome difficult challenges. Self-efficacy facilitates goal setting, business investment and persistence in facing obstacles and rising from adversity (Bandura, 1977). Self-efficacy in finance differs from other theories in that it examines entrepreneurship and behavioural finance theories. SME owners must have the behaviour and characteristics that support the business's success. The essential elements that an SME owner must possess are leadership in entrepreneurship and personality traits such as confidence in making financial decisions. Making sound financial decisions with entrepreneurial leadership will also positively impact business performance (Kautsar et al., 2019).

1.12 Entrepreneur Rise to Leadership

Leadership also impacts entrepreneurship and innovation in various practical ways. The impact of leadership on entrepreneurship is strongly dependent on the definition of

leadership and the measure used to assess leadership. Leaders and entrepreneurs are considered innovators and share several common skills, competencies and personality traits. It is argued that the development of the entrepreneur can be enhanced and accelerated through leadership skills and competency development. Therefore, strategic leadership forms an essential component of entrepreneurship. SME leaders are influenced by several factors, such as market and culture, requiring the entrepreneur to be a strong leader who can rise above this (Carton et al., 2014b). Leadership ensures that the organisation has a particular direction to move forward strategically, contributing to profitability and reputation within the industry. Leadership supports organisations in overcoming these challenges and adversities and stabilising market position in various sectors. Understanding the relationship between leadership and entrepreneurship is a pressing concern, as well as the extent to which entrepreneurs should have leadership skills and competencies to succeed at innovation and entrepreneurship (Carton et al., 2014). This research then examines entrepreneurs as leaders, their relationship with their personalities, and how these factors impact financial decisions and activities within SMEs.

Entrepreneurship is one of the most potent forces influencing the society of the 21st century (Antonakis & Day, 2017). Entrepreneurship is an increasing activity worldwide, even in countries that have yet to have international entrepreneur success stories, micro-entrepreneurs' opportunities to access capital have improved, thanks to the microlending industry (Antonakis et al., 2017). Compared to the most traditional leadership styles, such as transformational, transactional, or authentic leadership, entrepreneurial leadership is considered a school of thought around leaders' behaviours, actions, and attributes. According to Antonakis (2017), entrepreneurial founders are very engaged in their business, and sometimes, giving up control to face challenges. Studies in entrepreneurial leadership have focused less on the leader-follower relationship and more on the company-level strategy, mindset, personality and culture (Antonakis e, 2017). Entrepreneur leadership, as a style of leadership, is considered a new firm phenomenon, and emerging research has been examining entrepreneur leadership as a leadership style. Based on Antonakis's (2017) definition of entrepreneurial leadership, it is evident that this leadership style can be relevant to any organisation's type, size, and focus.

The entrepreneurial leadership style has two pillars. First, entrepreneurs are focused on opportunity and are influenced by their attributes and personalities. Second, the entrepreneurial leader motivates and influences followers (Antonakis & Day, 2017). The literature highlights entrepreneur leaders as "doers" and "accelerators." The following

behaviours are considered critical characteristics of the entrepreneurial leader: risk-takers, creativity, passion, and visionaries. The “Entrepreneur Doer” characteristics focus on the ability to develop and pursue new opportunities (Renko et al., 2019). This leader focuses on business development and successfully identifies business opportunities to scale the business (Newman et al., 2018). The “Entrepreneur Accelerator” characteristics are demonstrated through the leader and by encouraging followers to pursue entrepreneurial behaviours and businesses (Newman et al., 2018). Although researching many leadership-related phenomena in new companies and connecting entrepreneurial thinking to firm-level strategies and culture is valuable, research focusing on these topics seldom provides contributions that help differentiate entrepreneurial thinking from other types of leadership. Given the significance of entrepreneurial thinking and successful leadership in today’s corporate world and the growing popularity of entrepreneurship as a career choice among the young and old, academics must research the entrepreneurial leadership style and personality and its implications for individuals and organisations (Antonakis et al., 2017).

1.13 Entrepreneurship Definition

Gartner (1989) defined entrepreneurship as a ‘new entry’ which looks at establishing a new business and is an individual decision to work on their own account and risk. There are numerous difficulties faced in implementing plans. Many have described entrepreneurship as innovative, flexible, dynamic, risk-taking, creative, and growth oriented. The media has also defined entrepreneurship as starting and operating new ventures. Many scholars have reinforced that entrepreneurship is not just starting a new concept by developing products, processes, and services; it involves innovation management. The innovation management method has not been widely studied; this is changing as entrepreneurship is a rapidly growing subject in universities across Europe. The entrepreneur's desire to change things makes their role crucial in Innovation (Trott et al., 2015). Trott (2015) argues that the principles associated with entrepreneurship, such as growth, flexibility, and creativity, are desirable traits for Innovation. In 1848, the famous philosopher and economist John Stuart Mill described entrepreneurship as the founding of a private enterprise, which involved risk-taking decisions, the individuals who desire through the management of limited resources to create new business ventures.

According to Troit (2015), entrepreneurship can be described as a process of action that an entrepreneur may undertake to establish an enterprise. Entrepreneurship includes much creative activity and building something from practically nothing. Entrepreneurs can see an opportunity where others see chaos, contradiction, and confusion. Entrepreneurship is an

attitude and a character that seeks opportunities and takes a calculated risk to set up a venture. According to Trott et al. (2015), it includes numerous activities such as idea concept, creation and running of an enterprise. The definition of an entrepreneur is like that of entrepreneurship; the entrepreneur starts such an enterprise through a search for change and responding to others, then considers entrepreneurs as innovators. Entrepreneurialism is coming up with new ideas for products and markets. The entrepreneur perceives an opportunity, organises and coordinates resources needed for exploiting opportunities. Peter Drucker's classic book on innovation and entrepreneurship was published in 1985 and, at the time, was the first to address entrepreneurship and Innovation as a purposeful and meaningful activity. Innovation is the specific function of entrepreneurship, and entrepreneurship is new wealth-producing or wealth-producing potential resources (Enhanced et al., 2015). Howard Stevenson, who developed entrepreneurship teaching at Harvard Entrepreneurs School, defines entrepreneurship as pursuing an opportunity beyond the resources you currently control (Stevenson et al., 1990). The literature will now examine the entrepreneur personality as the heart of the issue.

1.14 Entrepreneur Personality (EP)

Entrepreneurial personality (EP) is a collection of personality traits widely related to entrepreneurial outcomes across most contexts (Howard et al., 2024). Regarding individual entrepreneurial orientation and attitude, the literature conceptualises that entrepreneurial personality includes personality traits such as innovativeness, proactiveness, risk-taking, locus of control, self-efficacy, and several other factors. Many scholars frequently show that the operationalisation of EP significantly predicts entrepreneurial outcomes. Despite the widespread study of EP, there is a need for more research. This section will explore the entrepreneur's personality by introducing the literature on the study's theoretical framework, the Big Five theory and other theories. Personality characteristics are one of the key research topics in entrepreneurship and founding theories that support characteristics as predictors of entrepreneurial outcomes, such as attitudes, intent, status, and performance (Howard et al., 2024). This section will introduce the entrepreneur's personality theories within the literature. Traits include the big five perspectives on openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. The theory will expand on the association between these concepts and the SME entrepreneur behaviours, leadership and motivation to start a business. It has been acknowledged that personality is vital in entrepreneurial leadership effectiveness and emergence. Various studies have shown a relationship between personality and entrepreneurship. Leadership researchers have not seriously considered trait

theories since Mann (1959) and Stogdill (1948) concluded that no trait consistently differentiated leaders from non-leaders across various environments, including entrepreneurship. Various studies and methodologies have reconsidered the relationship between the personality traits of entrepreneurial leadership (Lord et al., 1986). Other studies have also examined whether managers' personalities influence tactic strategies. Various studies use the five-factor model of personality (Goldberg, 1990) to provide a unifying framework for studying the relationship between personality and influence and its impact on leadership style (Cable et al., 2003). The following sections will discuss the various personality traits theory and the foundation for entrepreneurial personality.

The factor model of personality is known as the "Big Five" theory by Goldberg 1990. This model provided a unifying taxonomy for the study of personality, which is essential in communication and empirical research (Cable et al., 2003). The five-factor structure has been generalised across cultures and has ratings based on self, peer, observer, and stranger ratings; there is considerable evidence that the big five are heritable and stable over time. The factors comprising the big five personality are; extraversion, which represents the tendency to be sociable, assertive, expressive and active; agreeableness, which means the tendency to be likeable, buttering, adaptable and cooperative; conscientiousness, referring to the traits of achievement, organisation task focus and dependability; emotional stability; which is a tendency to be secure, emotionally adjusted and calm. Openness to experience is the disposition to be imaginative, artistic and autonomous. The remaining section of this chapter will discuss the theoretical framework of entrepreneur personality theories in the literature, primarily entrepreneurial orientation and the five decisional constructs, BEPE (Battery of Assessment for the Personality of Enterprising) and finally the theoretical foundation on personality, Big Five Personality.

1.15 Entrepreneurial Orientation and the Five (5) Dimensional Construct

Existing findings within the entrepreneurial field look at EO (Entrepreneurial orientation), which is usually understood as a five-dimensional construct: innovativeness, proactiveness, risk-taking, autonomy and competitive aggressiveness (Kozubíková et al., 2017). Prior research has looked at the relationship between entrepreneurship and personality traits, which has been inconclusive and provides evidence the need for further study. One of the critical reasons for this is that entrepreneurship is still a developing area of literature, with some consistent views of the definition of entrepreneurship. Drawing on prior theory and research, there is the suggestion that EO represents the entrepreneurial process that addresses how new ventures are undertaken. In contrast, entrepreneurship looks at the content of

entrepreneurial decisions by addressing what is being undertaken as a part of the new venture (Lumpkin et al 2000). The five dimensions of EO—autonomy, innovativeness, risk-taking, proactiveness, and competitive aggressiveness—were identified. The five dimensions represent constructs that are independent of each other. Entrepreneurship refers to new entries for start-up ventures and existing firms. This new entry can be described as entering new and established markets with new or existing goods and services. The new entry is characterised as the act of launching a new venture. To conclude, entrepreneurship is launching a new venture (G. Lumpkin, 1996). Entrepreneurial orientation is the processes, practices, and decision-making activities leading to new entries. It emerges from strategic choice perspectives, which align with the new entry propensity for success, determined by the entrepreneur's undertaken action and purposeful enactment. Therefore, this means it involves the key players' intentions and actions functioning in a dynamic generative process to create new ventures. The critical dimensions that speak to this EO include the act of autonomy, a willingness to innovate and take risks, and a tendency to be aggressive towards competitors while proactively relating to marketplace opportunities (G. Lumpkin, 1996).

All the factors, autonomy, innovativeness, risk-taking, competitiveness, aggressiveness and proactiveness, may be present when a firm engages in new entry and venture creation. Therefore, a successful new entry may also be achieved when only some of these factors operate. This evaluates the extent to which these factors can be used in predicting the nature and success of a new undertaking and may be influenced by contingent factors such as the external environment, the organisation structure for existing firms, and the characteristics of founders and managers (G. Lumpkin, 1996). Garners (1985) argues that creating a new venture is a multidimensional phenomenon, with each variable describing only a single dimension and being unable to be examined alone (G. Lumpkin, 1996). Risk-taking and competitive aggressiveness are critical elements of SMEs' entrepreneurial orientation and broadly impact their performance, even at the start-up stage (Ključnikov et al., 2016). European entrepreneurial literature defines entrepreneurial orientation as a firm-level strategic orientation that looks at organisational strategy-making practices, firm behaviours, and managerial philosophies from an entrepreneurial perspective (Ključnikov et al., 2016). Competitive aggressiveness is highlighted as one of the critical attributes of entrepreneurial orientation. It is closely interconnected with risk-taking and intensive competitive behaviour. Research has shown that younger companies are more prone to risk-taking, innovation, and aggressiveness (Soininen et al., 2012). Competitive aggressiveness evaluates the distinct idea

of moving ahead of competitors or others. It refers to going forward with the intensity of rivalling new entrants and often competing with existing rivals (Kozubíková et al., 2017).

Risk-taking refers to the behaviour of an entrepreneur in the face of uncertainty, and risk-taking decisions are considered relevant to the business's success, particularly in a dynamic business environment (Dalimunthe et al., 2025). Proactiveness, on the other hand, looks at the ability of the entrepreneur to foresee problems in the future; this is considered an initiative by the entrepreneur to foresee opportunities, exploit them and introduce new products and services to compete and remain at a place of competitive advantage within the market (Dalimunthe et al., 2025). Innovativeness reveals the tendency of a company to use and maintain procedures, new ideas, originality and experiments which bring forward new products and services (Dalimunthe et al., 2025). There is much literature on entrepreneurial orientation and how it affects firm growth; however, there are limited studies on how this impacts the financing strategies of SMEs at the start-up phase (Islam et al., 2011). Entrepreneurs' main problem is finding capital, and start-up financing has unique characteristics. SMEs face high risks and lack collateral to access funding from external sources, such as commercial banks and venture capitalists (Dalimunthe et al., 2025). Research in the field has identified entrepreneurial orientation as a theoretical framework for supporting the acquisition of capital or funding for SMEs (Dalimunthe et al., 2025). Most SMEs and entrepreneurs try to fund their businesses using internal funding sources such as their own resources. They turn to family and friends and avoid external financing sources such as business loans. If they decide to fund externally, they will pursue angel investors and venture capitalists (Dalimunthe et al., 2025).

1.16 The Battery for the Assessment of the Enterprising Personality (BEPE)

Personality traits play an important role when assessing and predicting entrepreneurial behaviour. Some studies look at specific characteristics of an enterprising personality that predict entrepreneurial behaviour. The primary personality assessment is the five general personality traits from the considerable five theoretical frameworks and the Battery for the Assessment of the Enterprising Personality (BEPE) (Postigo et al., 2021). Enterprising behaviours are essential in the modern economy (OECD, 2019). This modern economy is characterised by instability and rapid change, which requires constant innovations. Enterprising behaviour may occur in various settings, both personal and social. An individual who produces change within their position in a company is called an intrapreneur; this refers to those projects already in progress (Mumford et al., 2021). Another concept, mainly known as enterprising personality, is the extra-entrepreneur, which is usually the business starting

behaviour. Enterprising behaviours also occur in various social and personal settings; an individual may be enterprising at the personal level, with high levels of control and initiative that allow them to perform under challenging situations and manage life (Frese et al., 2001).

The BEPE is a questionnaire containing over 80 items that evaluate the eight dimensions that literature has identified as the personality traits related to enterprising behaviour (Postigo et al., 2021). The eight personality traits further discussed in the literature are self-efficacy, autonomy, innovativeness, internal focus on control, achievement motivation, optimism, stress tolerance and risk-taking (Postigo et al., 2021). The personality approach to entrepreneurship intends to discuss the relationship between personality traits and entrepreneurial behaviour, such as opportunity recognition. Research has aimed to identify the most critical personality characteristics to look at traits that predict entrepreneurial behaviour. Personality theory is one of the classical approaches to explain activities related to an enterprising personality. Personality characteristics such as business creation, intentions, and success affect entrepreneurial behaviours (Rauch, 2014). Each personality trait is further discussed in the next paragraph.

Self-efficacy refers to a person's conviction that they can achieve their goals through effectively organising tasks and actions and persistence when encountering obstacles (Costa et al., 2013). Recent Meta-analytical studies have reported a strong association between personality and entrepreneurial intent; entrepreneurs usually adopt the role of salespersons, whether they are pursuing a venture capitalist or convincing a customer or client to purchase their products and services (Wang et al., 2016). Previous studies have indicated that agreeableness and extraversion can predict levels of self-efficacy. People exhibiting high levels of self-efficacy typically perceive that they can effect change, and they also believe they have control over their actions (Wang et al., 2016). SMEs are highly dependent on the role of the entrepreneur leadership, primarily because it is one of the keys to success in the company. Entrepreneur leadership is the act of change that increases innovation, creativity, intuition, leadership skills, and motivation while encouraging taking risks (Kautsar et al., 2019). Self-efficacy is particularly important for entrepreneurial studies because it builds various elements, including the entrepreneur's internal and external self-esteem (Badura et al., 1997). Self-efficacy is an individual's belief in their ability to accomplish specific tasks; those with high self-efficacy will fight against whatever challenges arise (Kautsar et al., 2019). Self-efficacy is the ability of the entrepreneur to believe they are playing well and tend to set and persist in challenging goals while depicting positive attitudes towards difficult and stressful circumstances and failure.

Autonomy refers to the motivation for an entrepreneur to attempt to achieve a certain individual freedom (Gelderken et al., 2006). A primary driver of entrepreneurship is the need for autonomy; research has identified autonomy as a critical trait that motivates becoming self-employed. Autonomy is deeply rooted in the desire to determine their own goals. Researchers have looked at autonomy leading to greater well-being and why autonomy in the workplace leads to compensation. Various models have demonstrated that some individuals accept a lower earning potential to benefit psychologically (Caliendo & Kritikos, 2011). Innovativeness is the interest and will to establish new ways of doing things (Frese, 2007). External forces, such as accelerated product and technological changes, global competition, political instability, and demographic changes, challenge SMEs. These forces have enhanced the need for organisations to be better responsive to change, flexible, and capable of competing and evolving in a demanding global marketplace. (Sarri et al., 2010). In the growth of SMEs, optimal growth is the exploitation of intellectual capital, such as the creativity and innovation of the entrepreneur. It is considered the new era of competition and challenges for all enterprises. Innovation and creativity are strongly related to entrepreneurship since they are crucial elements in the definition of entrepreneurship as a form of creativity that can be identified as business or entrepreneurial creativity, as new companies are original and valuable (Sarri et al., 2010). Studies have determined that entrepreneurship and innovation are positively related and interact to support SME growth (Lee et al., 2004). An entrepreneur is considered an individual with the ability to identify and realise a specific vision from anything through human creative action. Research has found that business founders' personality traits correlate more strongly with self-efficacy, innovation and risk-taking than non-founders.

Locus of control is one of the most studied areas of entrepreneurship. Julian Rotter first introduced it in early 1970. Rotter (1966) defines an internal locus of control as the perception of individuals; this means the belief of one person about the events that took place in one's life is due to their actions (Abbas et al., 2015). Previous researchers have examined individuals taking responsibility alone and not depending upon others. Internal locus of control is another concept that has grabbed and received attention from scholars. The research on entrepreneurship strongly believes that individual actions lead to outcomes. Rotter (1996) argues that individuals with an internal locus of control are likelier to pursue entrepreneurship (Abbas et al., 2015). Achievement motivation is the desire to achieve standards of excellence, internal locus of control, causal attributes and consequences of one's behaviour (Cuesta et al., 2021). The work of McClelland in 1960 suggested that the main driver of entrepreneurial behaviour is achievement motivation. They need to achieve and be driven to excel or to work

hard to achieve a goal about a set of standards. Individuals with this need will spend much time thinking about doing a job better and accomplishing something important. High achievers are said to like circumstances where they can take personal responsibility for finding solutions to problems. In the UK, attitudes towards training and development as it relates to enterprise programmes are being introduced into the educational systems to take effect. Despite these criticisms, there is some empirical support for the idea that entrepreneurs are more motivated to achieve than others. Various authors have concluded that the need for achievement is a personality factor that has the most significant impact on the ability to ensure that the entrepreneur drives the SMEs to perform and grow; research also argues that there needs to be a shift from entrepreneurial traits to entrepreneurial skills.

Optimism is about believing that good things will happen more than bad things. Stress tolerance may be defined as resistance to perceiving environmental stimuli based on coping strategies. There is a need for further research on the personality of entrepreneurs, assessing the capital element of optimism and the behaviour of the individual entrepreneur. There is a discussion on the proposition for future research to investigate further for a deeper insight into the impact of the entrepreneur's behaviour and emotion on the venture creation process, indicating the success or failure of new ventures. Various research studies investigate the integration of the entrepreneur and the psychological element of over-optimism (James and Gudmundsson, 2011). The positive personality traits of entrepreneurs are seen as dynamic and unique; there is a need to examine this at various stages. Optimism, hope and resiliency have been reported in empirical research on successful leaders of innovative technology ventures. (James and Gudmundsson, 2011).

Risk-taking is the tendency and will to assume certain levels of risk or change to achieve an objective that offers more benefits and negative consequences (Cuesta et al., 2021). New businesses that arise usually operate in small and medium-sized enterprises and contribute to a significant element of the economy. Entrepreneurs' personalities influence the success of start-up companies (Kozubíková et al., 2017a). The entrepreneur's personality trait is discussed in theory and practice. A person interested in becoming an entrepreneur must have enterprising characteristics and specific personal qualities and dispositions. Based on the literature reviewed, three main personality traits are needed for satisfaction: motivation, locus of control and risk-taking. Most scholars argue that entrepreneurs have a particular characteristic that differentiates them from non-enterprising individuals. Entrepreneurs' risk-taking personality traits have had scholars' attention since the beginning of entrepreneurship studies. This era began in the 1970s and early 1980s when different models were developed

to evaluate the difference between entrepreneurs and employees (Abbas et al., 2015). Schumper (1954) argues that J.S. Mill was the first economist to refer to entrepreneurs in the field of economics; in his study, Mill (1848) described the entrepreneur as a direction driver, superintendent, controller, and risk taker. A positive relationship exists between risk-taking and the intention to start and run a successful business (Abbas et al., 2015). Risk aversion impacts self-employment. Individuals with less risk aversion are less likely to start a business and enter self-employment. Stress Tolerance looks at the ability of the entrepreneur to continue towards one's business goal in the face of adversity, which is a critical trait for success in entrepreneurship. Stress tolerance and conscientiousness are associated with the entrepreneur's ability to persevere through complex challenges. The founding theory on entrepreneurship personality, which forms the theoretical framework for this study, is the Big Five theory by Goldberg (1990). The following section will discuss the five personality traits and the research's relevance and founding theory.

1.17 Big Five Personality Theory (BFI)

Entrepreneurship typically allows the audience to think about starting a new business, which indicates that SME business owners must assume leadership roles within those companies, which is required for the companies to grow (Koryak et al., 2015). Therefore, entrepreneurs' personalities and behaviours impact the success or failure of those entities. Firms have a lifecycle through which they go through the nascent stages of starting up, consolidating, and growing. Various studies have addressed the inconsistency of the literature that defines the link between personality traits and financial decisions and entrepreneurial activities throughout the business lifecycle. The literature on personality traits has found validity and reliability in the Big Five personality dimensions through numerous years of study. However, there is still a dearth of research on entrepreneurial finance and personality to be explored (Hassan et al., 2016). The following paragraphs will examine the five personality dimensions and how they relate to entrepreneurship.

Entrepreneurs and entrepreneurship are essential to wealth creation and economic development, yet insufficient attention has been paid to the psychological characteristics of the five prominent personality characteristics in entrepreneurship research. Further discussion will be reviewed on the investigation into the psychological determinants of real-life entrepreneurs' start-up decisions regarding the prominent five theories: openness, conscientiousness, extraversion, agreeableness, and neuroticism. Past research and entrepreneurial personality represent a gap in entrepreneurship literature because of the lack of distinction between the contribution of the entrepreneur person and the entrepreneurial

process (Mitchell et al., 2002). The Big Five personality theory illustrates a promising research foundation for discovering personality differences between entrepreneurs and non-entrepreneurs. The five significant personality factors have received extensive research attention in study of personality (Antoncic et al., 2015).

Those with *openness to experience* are described as imaginative, original, unconventional, and artistic. Of the Big Five, openness is the best predictor of creative and scientific creativity (Costa, 1992). Inspiration is closely linked to creativity, and individuals scoring high in openness to experience should be more likely to engage in inspirational appeal as an influence tactic than people who are uninspired, predictable, and unimaginative. Open individuals are considered non-conforming, divergent, autonomous, and independent (Cable et al., 2003). Schumpeter (1934) described entrepreneurs as innovative and creative. Entrepreneurship includes creating value from innovation and maximising opportunities (Mitchell et al., 2002). Newness and originality are found in the heart of entrepreneurship and can be seen as behavioural or process based. Entrepreneurs are characterised by disliking routine and nonrepetitive work, which is a crucial description of the traits of the openness factor. Several studies have described openness as a significant variable of entrepreneurship personality traits (Singh et al., 2003). Openness is essential to an entrepreneur's personality, allowing the entrepreneur to identify significant opportunities. This is important as entrepreneurs must identify opportunities to form and start profitable businesses and create new ventures (Baron et al., 2007). Research focused on opportunity recognition emphasises the importance of someone being open to new ideas and ready to be receptive; entrepreneurs are always alert when it comes to new opportunities (Kirzber, 1982).

A *conscientious* individual who is ambitious, practical, task-focused, persistent, playful, careful, and organised. Those individuals scoring high on conscientiousness would be more likely to use relational persuasion, gathering factual evidence and presenting it. These individuals are ambitious, practical, task-focused, persistent, careful, and organised. This trait is more likely to use personal persuasion (Costa, 1992). Conscientious individuals are also considered less likely to use persona appeal since they are based on friendship and personal favours rather than task-focused productivity (Cable et al., 2003). Entrepreneurs take personal responsibility for their decisions, prefer decisions involving moderate risk, dislike repetitive, routine work and are interested in direct knowledge and results-oriented decisions (Mitchell et al., 2002). By comparing the content of the five significant factors, the need for achievement can be seen as one of the critical factors in describing conscientiousness. Research has found that conscientiousness is high in the entrepreneurial type persona

(Howard, 1995). Research has concluded that conscientiousness can be one of the most vital personality variables in the entrepreneur traits among the five personality factors discussed (Zhao et al., 2006).

Extraversion is the hallmark of sociability, dominance, and positively related emotionality. The extroverted person is talkative and expressive, enjoys interacting with others, and is very optimistic about the experience with others. Extraverted Individuals are likely to engage in personal appeal and inspirational appeal. Extraversion requires engaging with others in a positive and friendly manner (Watson & Clark, 1997). Theories have already discussed the characteristics of extroverts as assertive, which suggests that they are highly likely to be assertive and influence behaviour rather than passive or defensive. Furthermore, extroverts enjoy being reward-sensitive, making it more likely for them to use reward-based tactics (Cable & Judge, 2003). Extraversion describes the ability to be assertive and dominant, active, bold and energetic and found to be cheerful, jovial, merry and optimistic (Goldberg et al., 1990). Extraversion may facilitate achieving goals and be categorised as a good leader (Zadel, 2006). Past research has found that entrepreneurial-type personality can be classified as scoring high on conscientiousness and extraversion.

Agreeableness is a dimension of interpersonal behaviour; these individuals are altruistic, warm, generous, trusting, and cooperative. Research has shown that agreeableness is negatively related to aggression and hostility (Cable et al., 2003). These individuals preferred conflict resolution tactics and would most likely employ legitimising tactics. The agreeableness personality factors include traits related to entrepreneurship in both directions. Agreeableness includes entrepreneurs considered cooperative, helpful, patient, coordinated, friendly, trustful, and diplomatic; conversely, entrepreneurs may be characterised as combative, harsh, bossy, demanding, domineering, manipulative, rude and ruthless (Goldberg, 1990).

Neuroticism: The **emotionally** stable individual is calm, secure and not nervous. Those who score low on measures of emotional stability are likely to be anxious, emotionally embarrassed and depressed (Cable et al., 2003). The perspective of emotional stability appears relevant to two types of influence tactics: rational persuasion and inspirational appeal. This means calm, secure, and stable persons are likelier to use logic and rational persuasion when influencing others. Emotional stability may be a trait for personal success (Rauch et al., 2007). Research has found a negative relationship between emotional stability, self-employment, and entrepreneurial mindset (Singh et al., 2007). The finding of Goldberg, 1990 supports a negative connection between neuroticism and entrepreneurship since emotional

stability looks at autonomy, Individualism, and independence. The entrepreneur may appear impulsive, irritating, rebellious and provocative. Therefore, entrepreneurs can be seen as very complex people, which may be caused by frustration experienced during childhood, possibly impacting their self-esteem. This places the entrepreneurs in a continuous search for control and independence (Mitchell et al., 2002). There is also the dark side of the entrepreneur, such as high energy and a strong willingness to succeed; an entrepreneur can be unpredictable and convert to destructive traits for both the entrepreneur and organisations. On the one hand, they are enthusiastic, charismatic, gamesome, and achievement-oriented, but they are considered thoughtless and impulsive, which represents a challenge for others to work with (Mitchell et al., 2002). This translates into their obsessions with the need for control over everything and negatively affects their relationships with others. This drives the literature to examine the dark trait personality, the interconnectedness between entrepreneurship and the Big Five personalities, and its impact on financial resources affecting the entrepreneurial processes. The next section will examine the justification for the examination of the Big Five theory.

1.18 Justification for Big Five Personality

Academic research has considered the 'Traits of entrepreneurs' or the 'traits' that make entrepreneurs successful. Astebro et al. (2014) highlight that the publication in 1921 of Frank Knight's book, risk, uncertainty and profit, was the starting point for a key investigation that points to rigorous and careful research on the personalities of entrepreneurs, which set them apart from general business managers. For many decades, academics have focused on intentions to start a business by carefully examining personality traits that are likely to start businesses, including traits such as innovation, assertiveness and risk-taking. Further academic studies have historically focused on introducing entrepreneurship training, such as the development of high school, university and executive business leadership programmes, particularly examining hard skills rather than personality mapping(Kerr et al., 2018). Reviewing historical literature, it is very clear that there is a need for a clearer understanding of the specific traits of entrepreneurs to better align with settings and the entrepreneurial process. The previous section focuses on the key personality theories, such as the five (5) dimensional constructs such as autonomy, innovativeness, risk-taking, proactiveness, and competitive aggressiveness, explored in the earlier section. Further personalities, such as Battery for the assessment of enterprising personality (BEPE). The eight BEPE personality traits further discussed in the literature are Self-efficacy, Autonomy, Innovativeness, Internal Focus on control, Achievement Motivation, Optimism, Stress Tolerance and risk-taking. The

most used personality concepts in the recent literature, when personality emerged in the 21st century, included Big Five (5) Personality, need for achievement, internal locus of control, innovativeness and self-efficacy.

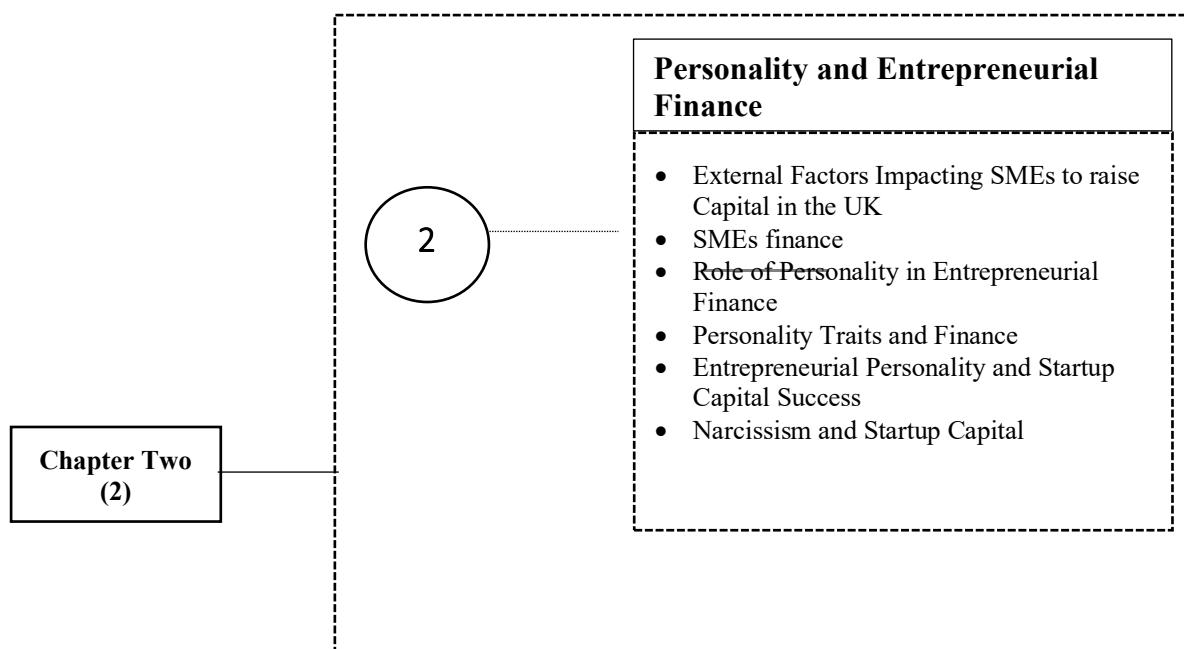
The Big Five (5) Personality had the second most substantial work, followed by risk-taking within the literature. The Big Five include personality such as openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. The Big Five personality has been the prominent personality since the 1980s (Kerr et al., 2018). Substantial work has been done on entrepreneurial intentions and the above-discussed personality theories; however, narcissism has not been significantly connected to the Big Five personality and examined with actual entrepreneurs within the United Kingdom. Big Five Personality is commonly used within the field of entrepreneurship in the study of entrepreneurial intentions. A clear justification for the use of the Big Five personality framework is that, while it has been studied in the context of entrepreneurial intention, there have been only a few studies that examine the connection between the Big Five personality and narcissism, as well as the entrepreneurial process of acquiring financial resources for the venture. The thesis primarily focuses on narcissism; in the literature on entrepreneurship, narcissism was connected to entrepreneurship through assessing the relationship between narcissism and risk-taking and entrepreneurs. There was limited research on Big Five personality and narcissism connectedness within the field of entrepreneurship, which was identified as a gap in the literature. This was the first justification for the development of the thesis on Big Five Personality and connectedness with narcissism. Secondly, the Big Five personality theory is the foundational theory of entrepreneurship, providing the basis for understanding entrepreneurial personality and serving as a pillar for building knowledge of narcissism.

CHAPTER TWO (2): ENTREPRENEURIAL PERSONALITY AND FINANCE

2.1 Introduction

This chapter will discuss the literature on personality and entrepreneurial finance and focus on the body of literature and work done on entrepreneurial personality and finance. It is important to note that there are limited research and publications that examine narcissism and entrepreneurial finance as the focus of this research. This thesis is a body of work that examines this relationship. Primarily, the chapter will first examine the external factors that impact SMEs' ability to raise capital through the literature of entrepreneurial finance. Then, further develop the discussion on entrepreneurial finance by exploring entrepreneurial sources of funding as the underpinnings and foundations of preferences. The foundation discussion on SMEs finance, pecking order theory and trade-off theory. Discussion on the various methods of finance explored by entrepreneurs will be discussed in the context of the research, and these include banking finance, trade credit, venture capital, angel investors, equity IPO, Debt and informal debt. The chapter also examines existing literature focused on the role of personality in entrepreneurial finance, analysis of the work completed on personality and finance, and further discusses the focus of the thesis, Big Five personality and narcissism. The chapter is summarised in the figure below.

Figure 4: Structure of Chapter Two (2)



2.2 External Factors impacting SMEs' ability to raise capital in the UK

SMEs face many challenges within the UK. This chapter examines the external factors SMEs face that impact their enterprising abilities to raise financing. Some primary external factors impacting the ability to raise capital are availability and access to finance, information asymmetries, financial literacy, quality collateral, and family establishments. Availability and Accessibility of finance remain one of the main concerns for SMEs, as the UK government and academics continue to evaluate the “MacMillan Gap” and the inability to raise adequate capital and operate efficiently; this is the constraint SMEs, start-ups and innovation face. The central gap is seen in the supply of finance due to the likelihood of high default risk (Storey, 1994). Many studies have been conducted in the UK and globally examining how the lack of access to finance constraints start-up inception, growth, performance, and competitiveness in the UK economy (Johnson et al., 2007).

Information Asymmetries are another challenge faced by entities in the UK and globally. The failure rate of SMEs is considered high, yet these SMEs contribute to the economic development of various countries. One of the critical theories discussed in the literature is the sub-optimal capital structure due to resistance from external financing strategies and providers to lend to micro and small enterprises. Asymmetric information causes a higher risk of SME failures globally. The absence or limited availability of adequate financial information restricts debt providers from adequately assessing the risk of lending and investing in micro and small enterprises (Hussain et al., 2018). To address the information asymmetry, lenders to SMEs usually seek collateral and set higher charges; this requires improving the quality of financial information provided, enabling lending institutions to analyse and make effective decisions (Hussain, 2016). Financial education for entrepreneurs mitigates information asymmetry and reduces monitoring costs, and the flow of capital (Hussain et al., 2018). One explanation that banks in the UK offer for SMEs' for high rejection rate of loan applications is the poor preparation and provision of financial information to allow for adequate risk assessment. This is primarily because of information asymmetry, which may require higher monitoring costs and due diligence.

Financial literacy is another factor that impacts SMEs and raises capital. Financial skills and literacy are essential in enabling managers to make strategic decisions relating to investments and timely interventions to address complex financial decisions (Stadler et al.,

2013). The owner/manager needs to understand how to analyse and address financial decisions relating to the SME, which will impact its success in securing financing (Hussain et al., 2018). Financial literacy entails not just the acquisition of financial knowledge but the ability of managers and entrepreneurs to use knowledge in collaboration with broader skill sets, communication, cognitive skills, and networks to achieve desired /objectives (Wise, 2013). A combination of internal and external financial literacy has correlated highly with business performance and young entrepreneurs (Bilal et al., 2011). One of the explanations offered by banks in the UK for the rejection rate of loan applications by SMEs is the poor preparation and provision of financial information to allow for adequate risk assessment, because of the information (Bruns and Fletcher, 2008). Lenders should seek disproportionate collateral and higher charges for loans to reduce the negative impact of information asymmetry. SMEs with financial literacy enable owners and managers to embed good financial practices and develop systems to record, analyse and produce management and financial information that assist with efficiency. Operations and better decision-making support enterprises in enhancing capabilities that support faster growth (Hussain et al., 2018). Financial literacy enables owners and managers to secure external finance and development.

The literature and knowledge, non-financial literacy and SMEs examine the financial literacy of the entrepreneur, who is positioned to ensure a more optimal capital structure with excellent access to finance and better use of resources, ultimately maximising their growth potential. Therefore, it can be concluded that financial literature informs consumer choices, investment decisions and behaviour. The interconnectedness of financial literacy has been studied and is proven to be a resource that impacts a firm's access to debt and finance (Hussain et al., 2018). The research intends to add to the literature by examining how the entrepreneur's big five personality and narcissism, instead of financial literacy, is better able to understand the ability to access finance and financial resources to improve and grow small and micro enterprises. To access finance, one of the primary sources of funding SMEs rely on is bank loans, and high-quality collateral is a significant requirement for getting an approved business loan. Many SMEs rely heavily on debt financing, and banks will stipulate all the actions to the SME entrepreneur, including the requirements to enact or guarantee their ability to repay the loan. Therefore, this implies that the debt financing market may be characterised by loan rationing (Brown and Lee, 2019). SMEs often find it difficult to issue security for loans and are frequently denied financing owing to their lack of collateral. Scholars have also noted that banks use credit scores based on a transactional decision rather than relational banking connections, which further emphasise asymmetric information between lenders and

borrowers (Brown & Lee, 2019). Research has shown that SMEs with tangible assets have a higher financing mix and an advantage with a higher availability of collateral (Degryse et al., 2015).

Family-managed business is another challenge small businesses face, including family firms (FF), which are fundamentally important for the economy and growth. Surprisingly, there is minimal research on FF corporate policy decisions (Burgstaller et al., 2015). Finance and capital structure decisions are one field where the unique characteristics of SMEs and FFs, particularly their operating environment, are examined. SMEs' finances are unique due to the nature of small enterprises, and family firms are a dominant group of SMEs. Family firms display features that look at capital structure choices differently from non-family firms (NFF). Family firms may finance their enterprises through debt financing, and many scholars have observed that capital structure differences are not simply due to family ownership. However, they are contingent on family management (Ampenberger et al., 2013). The family firm is found to have a significantly higher debt ratio than non-family firms; this is driven by the need to maintain control of the firm, accept creditors' influence, and increase the risk of bankruptcy (Ampenberger et al., 2013). Family firms concentrate on value creation over various generations and long-term firm survival. They argue that this makes family businesses risk-averse and leads them to establish unique relationships with debt holders. To set the theoretical framework for financial decision-making, the next chapter will discuss the financing strategies of SMEs by discussing the various financial choices available to the SME entrepreneur. This will set the atmosphere for understanding the financial options available to the entrepreneur.

The research examines how the entrepreneur's personality trait influences the entrepreneur's ability to raise bank finance; this theoretical framework has not been previously established within the literature. It is also important to note that micro and small businesses differ from large companies based on legal formation; entrepreneurs of large businesses may have the advantage of limited liability (Vieira et al., 2020). The theory of personality traits is one of the main approaches to the study of human personality, and this examines and focuses on the measurement of traits or characteristics that differ among individuals, which may influence the decision-making process. In the literature, managerial personality traits on capital structure in SMEs examine traits such as optimism, risk tolerance, sense of control, attitude towards debt and issues relating to gender. Overconfident entrepreneurs believe the capital markets underestimate their company's debt securities.

2.3 SMEs Financing

This section will discuss the financing strategies used by SMEs within the UK. In the research context, it is essential to understand the theoretical background of financing strategies for SMEs and the founding theory in entrepreneurial finance. The thesis will also discuss the pecking order theory and various funding choices, both internal and external, such as bank finance, venture capitalist, angel investor, family and friends. The thesis focuses on personality and narcissistic entrepreneur' financial decisions within their enterprise. Figure 4 summarises the concepts underpinning entrepreneurial finance and personality within this chapter. The financing of smaller firms has significantly hindered their role in the overall performance of the UK economy and is deeply rooted (Hughes, 1997). The Wilson Committee, in its report on SMEs, argues that SMEs are considered relatively risky and are expected to face higher interest charges or more severe security requirements than larger firms. They concluded in the report that many banks cautioned smaller and newer SMEs about being rationed in the market for loans and bank finance. Additionally, the report highlighted the shortage of start-up and equity development capital for fully geared, established SMEs wanting to expand (Wilson et al., 1987). According to modern capital structure, financing for SMEs should fall within a reasonable financing sequence of internal funding, private equity and debt financing (Liu, 2024).

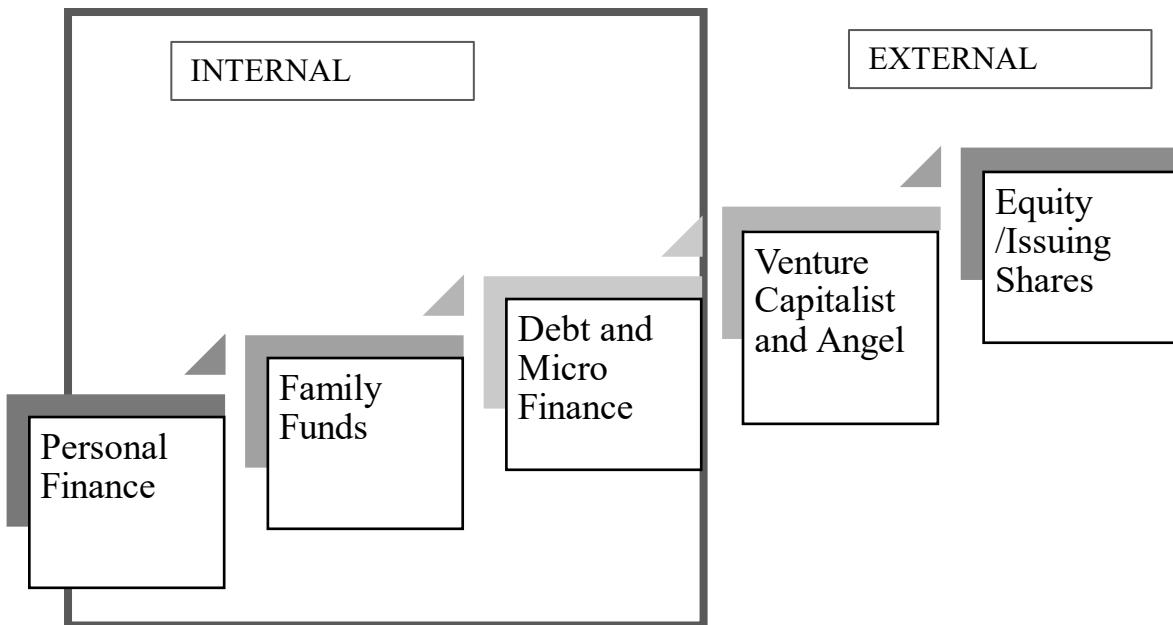
Innovation plays a significant role in enhancing economic growth and has the potential to change and create opportunities for SMEs. Therefore, a supportive environment regarding resources and information provides an opportunity for SMEs (Andries et al., 2013). SMEs are typically unaware of their financial health and are not expected or required to present financial statements to the public. However, external finance from banks and other financial institutions is the primary funding source for investing in technology and innovation (Benfratello et al., 2008). The significant change most SMEs face is the lack of collateral and credit trustworthiness, which is lower than that of larger-sized firms. For this reason, many SMEs have trouble accessing financial capital (Calcagnini et al., 2011). Several scholars have investigated the direct relationship between SMEs and finance and firms' performance. In summary, results have indicated a positive and negative relationship between firms' performance and SMEs' finances.

Insufficient studies examine the different types of financing, particularly in firms with innovation and its association with improving firm performance. (Kijkasiwat et al., 2020). Particularly, when discussing the personality of the entrepreneur and the implications for successfully acquiring funding, further consideration should be given to how personality

influences formal and informal financing and impacts the performance of innovative SMEs. The types of creative activities in SMEs and large firms are different; therefore, financial support could affect their performance in various ways (Dooley et al., 2016). It is empirically known that innovation activities are limited by the accessibility of sufficient funds (Hall, 2010). SME finance positively impacts firm performance, employment, and capital structure (Kersten et al., 2017). However, SMEs often face various challenges while searching for new sources of funds. The main problems of insufficient funds for SMEs are the demand gap, which looks at various capital structure determinants, and the supply gap, which examines SMEs' limited availability of funds. Knowledge gap, on the other hand, looks at the lack of information and knowledge in the accessibility of funds, and finally, the benevolence Gap, which is the lack of willingness of financial institutions to provide the relevant funding and source of finance to SMEs (Kumar et al., 2015).

This chapter discusses in further detail the various types of finance strategies in SMEs. Various studies examine the debt financing gap exclusively, while others revisit the equity financing gap (Neely et al., 2012). Capital structure decisions have been a critical focus of research attention since 1958 (Modigliani et al., 1958). The main theoretical explanation for the capital structure determinants was introduced by the Pecking Order Theory (POT), as discussed by (Donaldson et al., 1961). This was further discussed by (Myers et al., 1984), capital structures reflect the relationship between internally available funds and investment requirements. The Pecking Order Theory (POT) suggests that companies have a hierarchy of preferences concerning sources of funds. The relevance of asymmetric information from management and potential capital providers drives this. SMEs' capital structure changes based on their lifecycle. The challenge of asymmetric information is a challenge for SMEs in the relationship between owners/managers and creditors. SMEs are not listed on the stock exchange and must maintain specific requirements (Serrasqueiro et al., 2012). This then challenges creditors to access information to support their growth through borrowing.

Figure 5: The source of funding based on The Pecking Order for SME Financing



Source: Authors Own Work

The Pecking Order Theory (POT) explains the order in which owners and entrepreneurs are most likely to access funding. First, entrepreneurs fund their businesses using their savings and ability to access loans with personal assets and collateral. (Serrasqueiro et al., 2012) This phenomenon results from SMEs being considered high-risk during the early stages of growth and is known for difficulties in obtaining external finance; once entrepreneurs have exhausted those resources, they would then turn to commercial banks' microfinance to source external debt to expand, after which they would consider raising capital by listing on the stock exchange (Serrasqueiro et al., 2011).

According to the pecking order theory (POT), the observed capital structure looks at the relationship between investment requirements and internally available funds. The POT theory suggests that most companies have a hierarchy of preferences related to the source of funds, resulting from asymmetric information between management and potential capital providers. This may influence firms to avoid raising external equity by issuing new shares. SME leaders may then exit valuable investment opportunities by focusing on internal funds. This means management will avoid new equity issues, and borrowings will be determined as a residual between investment and retained earnings (Błach et al., 2020). Pecking Order

Theory (POT) is one of the primary theoretical approaches developed to explain capital structure decisions in enterprises. It was first proposed by Donaldson (1961/2000) and then further developed by Myers and Majluf (1984). The theory looks at financing decisions in the imperfect world, symmetric information, and transaction costs. Over the last three decades, the market for entrepreneurial finance has grown significantly, which is reflected in the growth in research on entrepreneurial finance. Providers of funds to entrepreneurial ventures, whether they are venture capitalists, angel investors, debt holders or banking financing, all face agency challenges (Martino et al., 2022). Firstly, there is information asymmetry between the entrepreneur and fund providers. The entrepreneur's personality, particularly narcissism, may misrepresent the venture's prospects because they may have an inflated belief in the venture's success or be less than honest, leading to further challenges (Martino et al., 2022). The chapter will discuss traditional sources of entrepreneurial external funding for SMEs and introduce founding theories such as the trade-off theory.

Understanding the dynamic of trade-off theory (TOT) related to SMEs in entrepreneurship is essential. Entrepreneurs are expected to understand and identify the capital structure that best meets their business needs and maximises the firm value, which will require a financial decision regarding external funding. The trade-off theory argues that the cost of equity is far more costly than the cost of debt. It strongly argues that firms allocate their resources based on tax benefits and targeting an optimal debt ratio; therefore, the entrepreneur will likely consider these factors (Adair et al., 2015). The pecking order theory challenges this concept, which previously discussed that firms and entrepreneurs prefer a particular sequence of funding their venture. Sources whereby they may avoid external funding, where they have access to internal funding by preferring debt and avoiding equity (Adair et al., 2015). However, previous theories, such as Modigliani and Miller (MM), have proved the irrelevance of capital structure by finding that the assumption of the enterprise's market value relative to the after-tax, which compensation does not hold. This implies that the tax advantage of debt is more significant than imagined, ultimately supporting the tax model (N. Liu, 2024). SMEs may struggle to fit into the context of the trade-off theory, and the theory is considered more beneficial to larger firms. Pecking order theory and trade-off theory are the most relevant theories relating to the financial behaviour of SMEs.

Scholars have highly researched banking financing, the most researched theme in SME financing, particularly from a supply side. The existing literature discusses the relevance of banks as the most appropriate external source of capital for SMEs in developed and developing countries (Rao et al., 2021). Scholars have argued that bank financing can help

SMEs perform better than other financing sources due to the high monitoring done by banks; this helps ensure that SMEs use their funds more effectively and responsibly (Rao et al., 2021). Debt capital financing and increases in SME leverage present challenges which affect liquidity policy, market consolidation, managerial ownership, and the impact of the financial crisis (Rao et al., 2021). There is a significant difference in debt financing between large firms and SMEs, as larger firms usually have more financing options than smaller SMEs. When SMEs make financing decisions, selecting long-term or short-term debt is important, as short-term debt attracts a higher risk.

Trade credit is a significant source of financing for SMEs. It is essential because it delays payments for goods and services after they have been delivered or rendered because of agreements between the SMEs and supplier firms. Trade credit allows SMEs to forecast cash requirements in the short term (Rao et al., 2021). SMEs use this short-term financing when alternative sources are absent or more expensive. Trade credit is an essential funding source in developing nations where banking and financial systems are less developed and sophisticated enough to take on risks in finance. Short-run financial management of customer receivables and payment suppliers' activities takes up a significant amount of the entrepreneur's time (Silva, 2024). Trade credit supports cash flow management by helping managers understand the operating cycle, including production, distribution, and customer collection (Silva, 2024). It is important to note that understanding the level of credit to offer customers is essential in managing the impact of trade credit on profitability and managing default payments.

Venture Capitalist (VC) tends to be the most widely used form of equity financing for entrepreneurship. VC firms raise funds from high-net-worth individuals, university endowments and pension funds and invest in a portfolio of innovative companies (Martino et al., 2022). Venture capitalists seek to receive higher returns than ordinary investors. These fund providers are usually small and work closely with the SMEs they invest in and support them through the venture business process. Venture Capitalist (VC) fund provides capital and usually mentors the venture within ten (10) years. The goal is a timely exit through acquisition or initial public offering (IPO) (Martino et al., 2022). They initially look at conducting comprehensive screening before they move forward and invest in the new venture. They are only interested in those they are confident will succeed rather than focusing on making significant investments. Therefore, VC splits funds into multiple rounds of investments. Compared to the debt holders, VC's main objective is not to minimise the risk but to maximise their payoffs while managing risks. Venture capitalists (VC) investors focus more on a

strategy that can maximise the firm's value in the long run. Venture Capitalist (VC) also contributes valuable expertise and networks to support their invested firms (Martino et al., 2022). They also face adverse selection challenges due to systematic, unsystematic, and informational risks associated with the challenges of a funding start-up business. Research has expanded to examine the type of entrepreneurial personality venture capitalists prefer in their decision-making to offer funding to the entrepreneur (Andreoli & Rouwelaar, 2024). The study examines the big five personalities and how the management of the entrepreneur personality influences the selection for funding in the Netherlands (Andreoli & Rouwelaar, 2024). Results from the study confirmed that venture capitalists' financial and impact portfolios seem to confirm the importance of education and experience and seek distinct entrepreneurs' personality traits (Andreoli & Rouwelaar, 2024). The results confirm that, in addition to complex traits, the soft traits of entrepreneurs influence venture capitalists' decisions and feed into their gut feeling in the selection process (Andreoli & Rouwelaar, 2024). Finally, this is referred to as the 'Horse' and 'Jockey' in the field of venture capitalist, and this refers to the phenomena of decisions to invest in the earlier stages of the venture primarily rest with the entrepreneurs (the jockey), while decisions to invest in the latter stages of the venture primarily rest on the characteristics of the venture (Horse) (Andreoli & ten Rouwelaar, 2024).

Angel Investors are considered high-net-worth individuals acting alone or in a formal or informal syndicate who invest their own money directly in an unquoted business in which there is no family connection and who, after making their investments, usually provide advice and may occupy the board of directors' position (Martino et al., 2022). The primary role angel investors play is to fill the funding gap in the market; this gap exists between internal funds from the entrepreneur, family and friends and external financing raised from institutions. Most of the research is focused on the pre-investment stage, with limited research on post-investment activities. The monitoring process of angel investors is non-aggressive and informal, including primary interaction with entrepreneurs and office visits. Angel investors bridge the gap between SMEs and funding requirements; the angel investor is usually a high-net-worth individual who chooses to invest money in early-stage ventures, businesses and start-ups (Dlamini, 2024). For SMEs to attract an investor, some qualifying criteria should be met for each of the SMEs, development stages or funder requirements, depending on the type of funder they are targeting. Angel investors look at the background of the entrepreneur, and the attractiveness of the market, and the characteristics of the product or service (Dlamini, 2024). Studies have also focused on how angel investors make decisions

based on the observed personal characteristics of entrepreneurs and their teams (Boerner et al., 2024). Angel investors have long said that they invest in people and not products; they sometimes reject pitches because of the characteristics of the entrepreneur and management team rather than a lack of business innovation (Boerner et al., 2024).

Equity is the landmark event in the SMEs funding journey, and it starts with the Initial Public Offering (IPO). When SMEs experience growth, accessing equity is a crucial choice management makes, a financial decision with advantages and disadvantages (Martino et al., 2022). It should be noted that some SMEs do not pursue IPOs but prefer to remain private and be bought through acquisition by larger firms. An IPO is when a private company becomes publicly listed by selling a percentage of its stock (Martino et al., 2022). IPOs are motivated by several factors, such as SMEs seeking external capital important for firm growth and capital expenses to fund research and development projects. This is an avenue for creating more wealth for entrepreneurs and founders, while for VCs, it is highly associated with an exit strategy. Within the literature, some studies examine the personal attributes of CEOs and how this influences the IPO pricing process, mainly the CEO (Chandler et al., 2023). The notion in the literature is that the CEO's personal attributes, such as charisma and humility, suggest that these personal attributes generally distinguish the firm's quality and influence their negotiation behaviour (Chandler et al., 2023). The literature states that CEO charisma will attract more investment interest from institutions and is also considered more effective in negotiating favourable IPO pricing; on the other hand, more humble CEOs will attract less investment interest from institutional investors and be less effective in the negotiation process (Chandler et al., 2023).

Debt is considered one of the most fundamental decisions a young entrepreneur firm must make compared to equity funding. Nonetheless, most young entrepreneurs prefer debt in financing their ventures because equity may give some level of control over their business (Martino et al., 2022). This is referred to as ownership dilution, which, from the entrepreneur's perspective, is seen as limiting subsequent gains. In practice, it is found that entrepreneurial firms generally rely heavily on equity rather than traditional debts such as bank loans and bonds. There are some critical reasons for this choice, as most start-ups have very few fixed assets to put up for collateral with traditional banks. Additionally, the information asymmetry between lenders and borrowers is limited for start-up firms compared to established firms. Also, new firms have high unpredictability in cash flow, which is expected to increase in the future. Commercial banks prefer short-term financing. New ventures have limited access to

debt through traditional commercial banking and are more likely to engage with informal debt.

Informal debt financing is gaining more recognition that not all the debt taken by new ventures is formal debt from lending institutions. This may be because of institutional voids in many emerging countries. Informal debt includes funding from supplier credit, customer prepayments, rotating credit associations, informal money lenders, personal savings and gifts from family or friends (Martino et al., 2022). Informal debt is attractive to many entrepreneurs in emerging economies for various reasons. It comes with no high collateral requirements compared to formal institutions, and there is usually a written or oral agreement relating to the interest rate and repayment terms. In some emerging economies, entrepreneurs who face extreme working capital challenges generally turn to informal money lenders. The literature on entrepreneurial finance has focused over the years on the relationship between the external environment and the SME's characteristics in the success or failure of external funding. Limited studies have focused on the entrepreneur and their characteristics and personality traits that may play a role in SMEs' early-stage success or failure. Various studies have attempted to explain the capital structure decision-making process, which has moved beyond policy and focused on how entrepreneurs are important factors that influence performance and growth (Slavec et al., 2012). Studies have noted that lenders are more prepared to lend debt to entrepreneurs with established social ties and extensive social networks, which depend on the entrepreneur's personality and extraversion (Slavec et al., 2012). This research examines whether external funding in entrepreneurial finance is influenced by the entrepreneur's dominant personality trait using the "Big Five Model," "Narcissism," and "Pecking Order Theory". The following section will discuss the literature on the Big Five and the Entrepreneur in further detail.

2.4 Role of Personality in Entrepreneurial Finance

The literature has consistently maintained that individual personality shapes economic behaviour by revealing preferences, such as risk attitude and trust, as well as personal biases (Quas et al., 2024b). It is therefore not surprising that personality traits from management theory influence cross-disciplinary collaboration with entrepreneurial finance. Individual characteristics matter in the context of entrepreneurial finance and are widely accepted by both the industry and academia. Work in entrepreneurial finance has focused on the observable, physical elements that determine individual human capital, such as gender,

ethnicity, culture, religion, and educational and professional background (Quas et al., 2024b). While the physical elements are essential to the social cognitive sciences and behavioural and experimental economics, they provide for a much richer characterisation of individuals based on their personality traits, the combination of which determines a person's distinctive character. The literature on entrepreneurship has long recognised the importance of personality traits, including classical traits such as overconfidence and risk tolerance. Over the last decade, the Big Five model has received some attention. There is also relevance of personality in financing and investment behaviour. There is no doubt that further work is needed in personality theory—the research on personality traits, perceptions, and motivational factors determining entrepreneurial intentions. There are rare studies which integrate personality. Although personality traits have been shown to have a statistical relationship with entrepreneurship, predictive value has remained limited in previous work (Farrukh et al., 2018). This research contributes to the research direction to move further work towards cognitive models to depict the influence on entrepreneurial behaviour. The literature on personality provides support for its role as a predictor of many aspects of entrepreneurship, such as intentions to start a venture, funding preferences, and financial resource acquisition.

2.5 Personality traits and Finance

Capital structure is a combination of debt and equity and supports business assets. Many entrepreneurs operate as sole traders, and a partnership may entail greater risk with limited liability. Therefore, founders rely more on personal funding during the early stages of ventures. The following traits, such as optimism, risk tolerance, and sense of control, have frequently appeared in the literature as key personality and attitude towards debts, and the literature has included references to gender and entrepreneurs. (Vieira et al., 2020b). The literature recognises that attitudes to gender and debts have a direct influence on capital structure, optimism, internal control, locus of control, and a negative indirect influence, and that risk tolerance has a positive indirect effect on capital structure. Regarding gender, females were found to be more optimistic and to have a greater internal locus of control. The first model of personality and individual traits examines personality and suggests that optimism, risk tolerance, sense of control, and attitudes towards debt, along with gender factors, influence financial resource preferences amongst micro and small privately owned businesses.

Optimism is one of the early personality traits, examined in the field of finance and capital structure. Optimism is a personality trait that shows stability over time and fosters a

general sense of strength and resilience. Optimism is usually over a long-term dimension of an individual's life. In the context of entrepreneurship, the most optimistic entrepreneur will prefer equity financing to debt, while the pessimistic entrepreneur will prefer debt financing to internal funding. This, therefore, also does not ignore that a higher level of optimism may affect the company's leverage because the entrepreneur is more likely to prefer internal funding sources. Therefore, the literature states that the higher the level of optimism, the greater the negative impact on capital structure (Vieira et al., 2020b).

Risk tolerance is another personality trait explored in the context of finance. Risk tolerance is the limit to the risks an individual is willing to accept, leading to less favourable outcomes. Entrepreneurs who are less risk-tolerant tend to define indebtedness in terms of their personal interest in maintaining their financial well-being and that of their business venture. This shows that a manager's risk tolerance is a determinant of capital structure, as managers, such as entrepreneurs, are more risk-prone and tend to use more debt. It is thus expected that a higher level of risk tolerance will positively affect companies' capital structures.

A sense of control is also understood as a common personality trait that managers and entrepreneurs may possess, and it is the individual's perception of personal power to demonstrate control and direction over decisions. It was observed that the sense of control and direction can be both a need to have power over internal and external factors within the business. People with an internal locus of control have a stronger sense of control over their lives. Individuals with an internal locus of control, then, exhibit greater control and management, which aligns with traits associated with success as entrepreneurs. It can be concluded that the internal locus of control can influence debt aversion and is a consequence of the capital structure. Therefore, it was concluded that a sense of control negatively affected the capital structure. Can the capital structure of businesses, while having a stronger external locus of control, have a positive impact? Control and capital structure are concepts that warrant further discussion and research within the field.

2.6 Entrepreneurial Personality and Startup Capital Success

This section will explore the underpinning literature on personality and examine research conducted on the success of microenterprises. Independent start-up capital has been examined in entrepreneurial finance, and personality in organisational behaviour; however, there has been little research examining the interrelationship between the two. This section examines research published in 2015 on microentrepreneurs in Uganda. A total of 384

samples were selected, and the research examines owners' microenterprises across Uganda's industry. The literature review will examine the Big Five personality factors in the relationship between startup capital and entrepreneurial success. The literature states that agreeableness and extraversion positively predict entrepreneurial success. Therefore, more extroverted entrepreneurs are likely to succeed in startup processes, while those who are more agreeable are likely to succeed in processes of startup capital funding (Martin et al., 2016). Extraversion and agreeableness were positively correlated with start-up success. Neuroticism, on the other hand, showed up as a negative correlation with success and entrepreneurial success in funding. Extraversion and openness to experience were found to be the most associated traits within the Big Five model that are positively associated with entrepreneurial success, highlighting the interpersonal skills of the entrepreneur's personality in securing start-up capital.

The common discussion on entrepreneurial finance focuses on inadequate financing and the failure to realise profits. Another common phenomenon in entrepreneurship is the need to borrow to finance entrepreneurial activities and to manage resources such as money, personal property, business knowledge, skills, and experience. The primary sources of funding, as discussed in previous sections, include a small loan from the banks, microfinance institutions, relatives and friends. The source of funding is important because it affects the business's profitability, growth, and competitiveness. Personality introduces psychological resources and is also an important resource for entrepreneurs during the start-up phase and in nurturing the venture to success (Martin et al., 2016). This thesis highlights the importance of psychological resources in acquiring financial resources during the startup process. Entrepreneurial behaviour and personality influence the success of startup finances and, in the long run, the success of the ventures. In the long run, the entrepreneur's character may also affect the appropriate use of startup capital. The theory of vocational personalities and work environments (Holland, 1997) is critical to the study of entrepreneurial personality. This theory posits that career choices are partly made in congruence with personal-occupational environment fit, which contributes to factors such as career satisfaction and positive performance (Martin et al., 2016). Within the theory, there is the notion that there are personality traits that differentiate entrepreneurs from non-entrepreneurs and include risk taking, locus of control, goal orientation, creativity, achievement orientation, marketing and competitive aggressiveness as discussed in chapters on personality.

The Big Five model is commonly used in personality research and entrepreneurship and is considered to have strong correlations with conscientiousness, extraversion, and

openness to experience, and a low correlation with neuroticism and agreeableness. Entrepreneurs spend much time interacting with stakeholders, and what is usually attractive to them is the enjoyment of adventure, dominion, impulsiveness, and self-confidence (Martin et al., 2016a). Risk-taking behaviour among extroverts increases entrepreneurial optimism and self-efficacy, thereby enhancing entrepreneurial intentions and success. Extraversion enhances entrepreneurial success by encouraging leadership. Neuroticism refers to emotional instability and includes fear, sadness, and anger, as well as hostility. The behavioural tendencies of neurotic individuals, such as sensitivity to negative feedback, distress and failure, and anxious responses to challenging situations (Martin et al., 2016a). This indicates a negative relationship between neuroticism and entrepreneurial success. Neuroticism also tends to reduce the propensity to take risks and the likelihood of pursuing entrepreneurial roles. Those who are neurotic are likely to have less social capital and fewer interactions, making them less likely to succeed in entrepreneurship. Openness, on the other hand, includes purposeful seeking and appreciation for new experiences. Openness to experience traits can help entrepreneurs appreciate customer needs and learn to navigate competition and market trends. Openness to experience is associated with self-direction and stimulation values, as well as intellectual curiosity, and entrepreneurs are more likely to question existing ways of doing business, which fosters the identification of new resources. Entrepreneurs high in openness to experience are more likely to succeed in acquiring start-up resources (Martin et al., 2016a). Agreeableness is a personality trait that concerns personal exploration behaviour and intellectual attitudes. Research on entrepreneurship has associated a high level of agreeableness with entrepreneurs. Entrepreneurs with high agreeableness are likely to succeed in business situations. The entrepreneurial incompatibility with agreeable individuals is attributed to their low self-interest, low achievement orientation and low competitiveness. Entrepreneurs with high agreeableness may have greater social capital, which is important for facilitating further opportunities and networking (Martin et al., 2016a). Conscientiousness refers to the ability to follow rules and to exert effort to achieve goals. The need to achieve goals increases an entrepreneur's competency and performance. Conscientiousness is also a form of high-level psychological capital that can increase an entrepreneur's effort and persistence. The literature confirms that the Big Five personality model is relevant for predicting entrepreneurial outcomes. Extraversion, openness to experience, and agreeableness were positively related to entrepreneurial success, while neuroticism and conscientiousness were not. The big five theory served as the underpinnings of personality theory and finance. Gradually, research is also linking traits such as psychopathy and

narcissism to entrepreneurial ability (Martin et al., 2016). The thesis, at an early stage of research, examines the relationship between the Big Five personality traits and narcissism. These traits are in the early stages of research and are relevant to entrepreneurial finance research.

2.7 Narcissism and Startup Capital Success

Narcissism has been found to have some influence on the process of startup; literature has, in recent times, explored this phenomenon by closely examining the association between narcissism and entrepreneurial finance. There is a need for further contribution to knowledge with the exploration of narcissism and entrepreneurship. This section will explore the literature on narcissism and startup capital. Entrepreneurial finance is an important activity at the start of a business, and narcissism is relevant at each stage of the entrepreneurial journey. In the early stages of the start-up, narcissism is considered to be very positive in influencing early activities, and after a time, this may become negative (Burger et al., 2024). The literature foundation for this study draws on upper echelons theory, which argues that an organisation's outcomes reflect the background characteristics, values, and cognitive biases of its top decision-makers. Traditionally, this theory has been applied to large firms to critique assumptions linking CEO traits directly to business success, yet it has rarely been extended to the entrepreneurial context. Applying upper echelons theory to startups suggests that founders' personal experiences, mental models, and demographic attributes may meaningfully shape new venture strategies and performance. This is a foundational theory that explains the relevance of the Big Five personality.

The literature on narcissism and entrepreneurship is scattered and broad, and there is limited focus on finance. When first establishing a startup, founders are accountable for a variety of tasks. According to current best practices, these tasks may include leadership, sales and growth, venture building, human resources, product strategy, and fundraising (Burger et al., 2024). Numerous studies agree that having a certain level of narcissistic personality traits positively affects entrepreneurial intentions (Wu et al., 2019). The concepts of entrepreneurship have been positively impacted by narcissism, as numerous studies have concluded. Studies that examine business students and narcissism and entrepreneurial inspiration have found a positive correlation. The financing process is an important activity for entrepreneurs. It requires high self-confidence, drive for achievement, and independence in the startup, which are positively correlated traits with a narcissistic personality tendency. One study found that the narcissistic founder views companies as a means to fulfil their needs

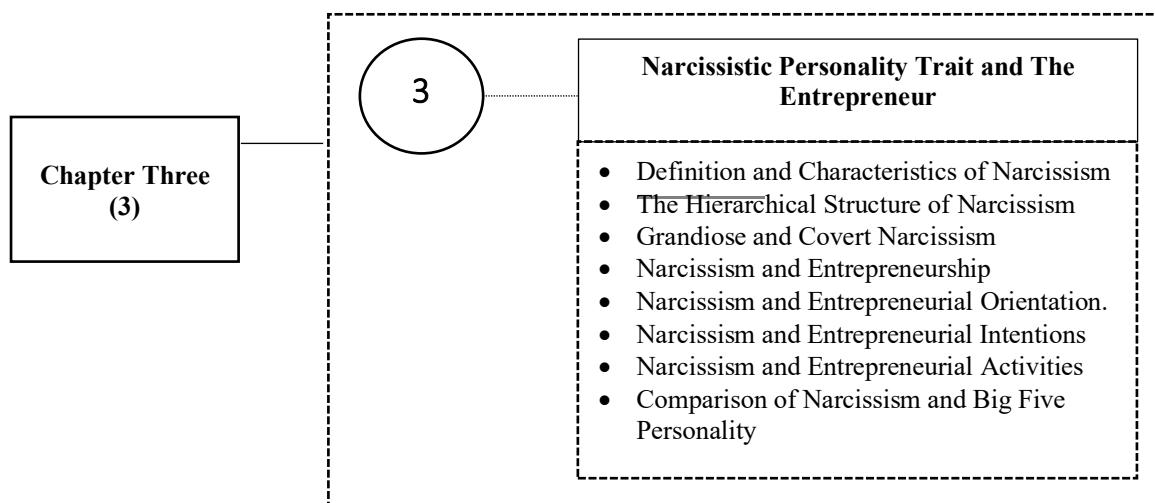
for status, dominance, prestige, success, power, and money. This is demonstrated in the financial resource acquisition processes (Kramer et al., 2011). Narcissistic tendencies and traits flow into the entrepreneurial activities. The effect of narcissistic tendencies on a startup's daily operations is significantly under-investigated (Burger et al., 2024). Research shows that higher levels of narcissism are beneficial to early-stage entrepreneurial conduct tasks that are crucial to later activities, and one such task is fundraising. One significant factor in early-stage investment decisions is the founder's personality (Prohorovs et al., 2019). To date, no research has investigated the influences of narcissism and funding raised through venture capitalists or whether narcissistic entrepreneurs have been successful in the financial resource acquisition process. Existing research currently looks at the influence of narcissism on crowdfunding, and the results indicate that narcissist do have funding goals, which is a strategic move to protect their fragile ego. The next chapter will discuss and examine the theory on narcissism and entrepreneurship.

CHAPTER THREE (3): NARCISSISTIC PERSONALITY TRAIT AND ENTREPRENEURSHIP

3.1 Introduction

This chapter will explore and establish the theory, concepts, and literature on narcissism by explaining the personality and discussing the hierarchical structure of both grandiose and covert narcissism. It will also define narcissism and describe the characteristics associated with the dark trait of narcissism. Additionally, the chapter will examine the structure and types of narcissism. Furthermore, it will explore the relationship between narcissism and entrepreneurial resilience, orientation, and activities. Figure 6 summarises the literature that will be reviewed in Chapter four (4).

Figure 6: Structure of Chapter Three (4)



3.2 Definition and Characteristics of Narcissism

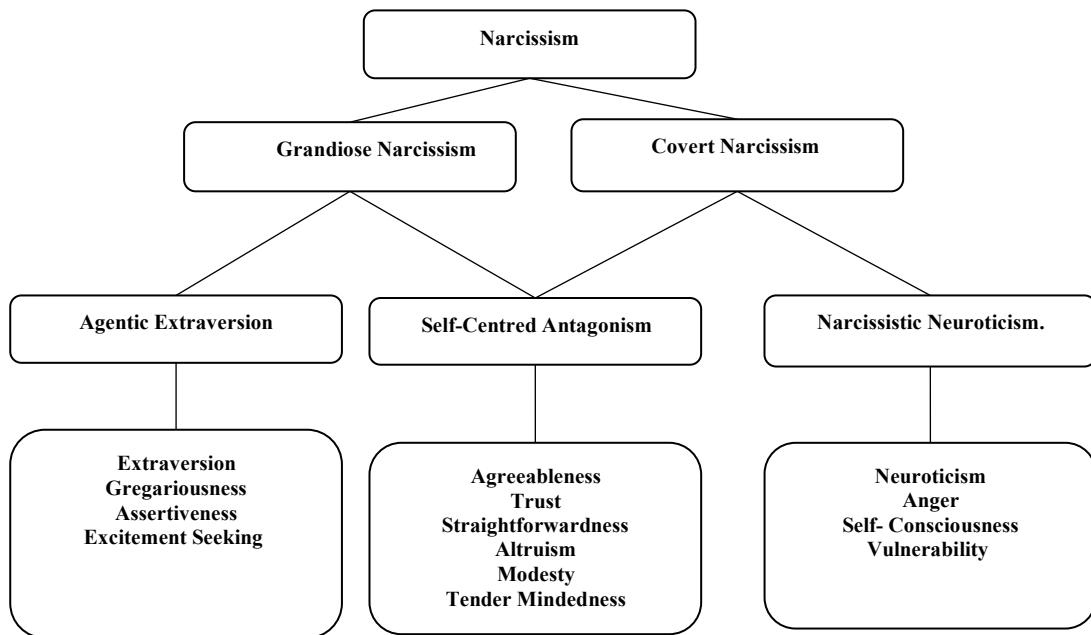
Narcissism is consistently defined in the literature as a personality trait characterised by arrogance, haughtiness, and grandiosity, as well as by a sense of superiority and a belief that one deserves special treatment. A narcissist constantly requires admiration, lacks empathy, is authoritative, is exploitative, and overestimates or emphasises their capabilities (Leonelli et al., 2019). There are two sides to narcissism: productive and unproductive. The productive side is characterised by making change and influencing the world, taking risks and pursuing vision and strategy with passion and drive. On the other hand, the unproductive aspect of narcissism is that the ability to manipulate others should be given attention (Leonelli et al., 2019).

The term narcissism refers to an individual's attitude, actions, and understanding related to managing their self-esteem; this is a personality dimension that can fluctuate between low and high levels, and when it manifests extremely, it may be considered a personality disorder. Based on the reviewed literature, two key dimensions of narcissism are worth discussing: pathological narcissism and non-pathological narcissism. Pathological narcissism encompasses grandiose narcissism and, even when it appears helpful to others to enhance their reputation, it is characterised by a lack of empathy, hypersensitivity, anger, amorality, irrationality, inflexibility, and paranoia. Conversely, non-pathological narcissism includes many observable traits such as vanity, an effort to demonstrate superiority over others, a sense of entitlement, and a desire to be the centre of attention. It also involves self-love, self-admiration, and the need to see others as an extension of oneself; individuals with this form typically consider themselves more beautiful, unique, and intelligent than others (Leonelli et al., 2019).

3.3 The Hierarchical Structure of Narcissism

Narcissism originates from a Greek myth about Narcissus, who looked at himself and fell in love (Leet et al., 2021b). In the literature, narcissism is defined as a trait characterised by arrogance, haughtiness, and grandiosity, with individuals who see themselves as superior to others and deserving of special treatment (Leonelli et al., 2019). A narcissist constantly seeks admiration, lacks empathy, and is often authoritative, exploitative, and prone to underestimating or overestimating their capabilities (Leonelli et al., 2019). Narcissism is a personality trait that ranges from low to high levels; at extremely high levels, it can be considered a personality disorder (Leonelli et al., 2019). Over the past two decades, research has shown that narcissism can be analysed across two distinct dimensions, as illustrated in Figure 7: the hierarchical structure of narcissism (Miller et al., 2021). In research, it is important to differentiate between grandiose and covert narcissism (Cain et al., 2008). Firstly, the narcissism structure describes the traits of both a grandiose narcissist and a covert narcissist, highlighting their similarities and differences (Cain et al., 2008). A grandiose narcissist is characterised by high self-esteem and is often advantageous for networking due to sociable traits such as assertiveness and exhibitionism; however, they can also be manipulative. An entrepreneur with grandiose narcissism might excel in networking situations, which enhances their assertiveness and exhibitionist tendencies. Conversely, individuals with covert narcissism often display low self-esteem, social withdrawal, and negative emotionality (Miller & Campbell, 2008).

Figure 7: The hierarchical structure of Narcissism



Source: (Miller et al., 2021)

The definition of narcissism lays the foundation knowledge for theoretical understanding. The thesis will now examine in more detail the type of narcissism. *Grandiose Narcissism, also referred to as exhibitionism," has been the focus of recent research.* The grandiose narcissists are more assertive and extraverted due to their characteristics of high self-esteem; they tend to exhibit a sense of personal superiority and entitlement, are willing to exploit others for self-gain and show hostility and aggression when challenged. Unlike covert narcissism, grandiose narcissist has high self-esteem and believe they are genuinely better and more competent than others. They are often characterised by high levels of *extraversion* (sociable and action-oriented) and low levels of agreeableness (Selfish and low social presence); some traits of the two structures may overlap between the two types of narcissism, they are different (Chatman et al., 2020). *Covert Narcissism, which is also referred to as "Manipulative,"* this stream of narcissism emerged from a clinical tradition that focuses on what is characterised by anxiety, fragile self-concept, high levels of neuroticism and low self-esteem. Covert narcissist emphasises a defensive self-presentation on low self-esteem and a more introverted nature. The theory that underpins this trait is the unrealistic level of a sense of superiority and overconfidence, which masks underlying insecurity and low self-esteem (Chatman et al., 2020). Traits of the grandiose narcissist found throughout

the literature to be productive in entrepreneurship are aggression, openness to experience, assertiveness, and extraversion.

3.4 Grandiose and Covert Narcissism

There are two sides to narcissism: *productive* and *unproductive*. The productive side is characterised by a passion for implementing change and innovation, as entrepreneurs pursue their vision and strategy with drive. On the other hand, unproductive narcissism manipulates others into doing what it wants, which may lead to complex relationships (Leonelli et al., 2022). Narcissism has both a bright and dark side. Narcissistic exhibitionist identifies opportunities and exploits them; they also encourage the firm to be innovative. They tend to be more welcoming of innovative ideas and direction, and are more creative. Narcissistic exhibitionist entrepreneurs are likely to be riskier, more proactive, and more innovative, and to positively impact entrepreneurial activities in the short run (Leonelli et al., 2019). The *unproductive* narcissistic traits prevent them from identifying entrepreneurial opportunities, acquiring resources, and learning from failures. Their adverse effects can often harm others, businesses, and organisations. One example is that they create unproductive behaviour and cause chaos in business relationships. The grandiose narcissistic entrepreneur identifies with the business entity's proactiveness, which enhances the entrepreneur's willingness to convince others to accept their ideas. The grandiose, narcissistic entrepreneur will influence others to agree with their opinion, and investors may buy into their business ideas and feel confident in their own judgment based on the grandiose narcissistic entrepreneur's assertiveness (Leonelli et al., 2019). Their need for admiration leads them to seek to demonstrate to followers. It is rooted in their ability to use their interpersonal skills to control outcomes. In the long run, this may negatively affect stakeholders, as the entrepreneur may use risky success to receive adoration from their followers (Leonelli et al., 2019). This research examines the productive side of narcissism, focusing on *grandiose narcissism* and its implications for entrepreneurial activities. Grandiose narcissism is the narcissist with a social personality, which is interconnected with the prominent five personalities: openness to experience and extraversion (Zajenkowski & Szymaniak, 2021).

Covert narcissism is also referred to as vulnerable narcissism, and in the past, research on narcissism was first discussed within clinical research (Chen, 2024). Within narcissism, which is classified as a personality disorder, there are two subtypes, as previously discussed. The overt type, which is the grandiose narcissist, struggles with less anxiety but experiences inner self-grandiosity and a desire to be affirmed and show attention. After a decision in the previous section, the grandiose narcissist may appear positive, showing

happiness, optimism, confidence, and satisfaction with their world (Chen, 2024). The covert narcissist, also known as vulnerable, is considered the fragile type, with more subconsciousness and an exaggerated self. The covert narcissism hides lofty views behind their shyness and heightened sensitivity (Chen, 2024).

3.5 Narcissism and Entrepreneurship

Narcissist has a strong bias towards considering themselves and their abilities, and significant overconfidence; because of this, entrepreneurs with narcissistic personality traits usually do not have a clear, accurate vision of reality, which may result in hazardous action (Shapira et al., 1995). Narcissist entrepreneurs use their businesses to satisfy their desires and preferences. Therefore, the choices and business decisions of a narcissistic CEO or entrepreneur are different from those that have favoured egoistic managers; instead of focusing on creating a robust, balanced, permanent environment, they are more likely to focus on “Big win and Big Loss” environment, which means they usual enforce an environment that is, extreme, risky, excessive, and performance-driven (Leonelli et al., 2019). The narcissist entrepreneur takes on greater risk, adopts bolder firm strategies, and is highly proactive. The theory highlights two main characteristics of the narcissist entrepreneur: the extremeness of being an exhibitionist and the propensity to be manipulative. The exhibitionist side relates to the trait of grandiosity and self-importance. The narcissist entrepreneur looks to the future for activities, projects, events, strategies, and all possible outcomes rather than anticipating needs and other problems. The narcissistic entrepreneur's manipulativeness manifests in their desire for abundant adoration and respect from their followers and in prioritising their well-being over what is best for the SME's health (Leonelli et al., 2019).

3.6 Narcissism and Entrepreneurial Orientation

As discussed in previous chapters, entrepreneurial orientation (EO) is crucial for economic growth, innovation, and employment in both developed and developing countries. This section will focus on the entrepreneur's narcissism and its influence on entrepreneurship in SMEs. Narcissism has two aspects: exhibitionism and manipulation (Leonelli et al., 2019). Research indicates that the exhibitionist side of narcissism and entrepreneurial resilience positively affect entrepreneurial orientation, whereas the manipulative side has a negative impact (Leonelli et al., 2019). Studies also show that resilience moderates the relationship between narcissism and entrepreneurial orientation. Entrepreneurial orientation, previously identified as a key driver of entrepreneurship, now receives significant attention in entrepreneurial research (Anderson et al., 2015). It is a multidimensional construct including

entrepreneurial behaviours and risk propensity. Meanwhile, entrepreneurial behaviour refers to the entrepreneur's intention to pursue strategies or proposals aimed at product and process innovation to commercialise opportunities. SMEs and EO are vital to economic development; despite increasing research on EO, many areas remain underexplored (Leonelli et al., 2019). There is a continued need to investigate how an entrepreneur's personality and abilities influence EO within SMEs; specifically, how these traits affect financial strategies and the overall direction of small and micro firms.

Several characteristics of narcissism are linked in theory to entrepreneurial orientation. Research has identified two propensities of the narcissistic personality, which are exhibitionist and manipulative traits (Leonelli et al., 2019). The exhibitionist entrepreneur will be more likely to take on higher risks and demonstrate risk-taking habits, which are usually critiqued by others; the entrepreneur will be very confident in their ability to control the risk and display little fear or failure in their communication and behaviour (Leonelli et al., 2019). The narcissistic entrepreneur will be convinced that their skills and talent can manage any threat SMEs face. They are confident that the risk will be a meaningful opportunity. This then increases the entrepreneur's self-confidence and leads to bold, firm strategies regardless of the resource limitations faced by the SMEs. The entrepreneur's proactiveness also enables the identification of new opportunities for higher returns and the pursuit of entrepreneurial initiatives (Wales et al., 2013). The narcissistic exhibitionist identifies and exploits opportunities; they also encourage the firm to be innovative, influenced by the entrepreneur's passion and perseverance. They tend to be more welcoming to new ideas and direction and are more creative than non-narcissistic entrepreneurs, which results in the SMEs being more open and exposed to risks. The exhibitionist entrepreneurs are likely to be riskier, more proactive, and more innovative, and to have a positive impact on EO. The manipulative, narcissistic entrepreneur desires a demonstration of adoration and respect from followers. It is rooted in the ability to use their interpersonal skills to control outcomes such as events and people involved; this can threaten a firm's risk propensity, and the entrepreneur may use risky success to receive adoration from their followers (Leonelli et al., 2019). The manipulative, narcissistic entrepreneur can reduce SME proactiveness, as it enhances the entrepreneur's willingness to convince others to engage in risky activities. The manipulative, narcissistic entrepreneur will make decisions regardless of others' opinions and influence others to agree with their views and ideas, impacting the SME's innovativeness (Lonelli et al., 2019).

3.7 Narcissism and Entrepreneurial Intention

Entrepreneurial intention refers to the desire to start and create a new venture. This includes the motivation and decisions of individuals at a particular moment to start a new venture. The literature recognises that entrepreneurial intentions start with various factors such as culture, environment, and cognitive and personal fate, which play an important role in shaping an individual's journey to becoming an entrepreneur (Afshar et al., 2025). Entrepreneurial intention and capabilities that promote creativity and innovation and contribute towards nations' development (Olaore et al., 2021). Prior research in entrepreneurship has examined external factors such as the external environment, culture, gender, ethnicity, and entrepreneurial knowledge; however, the recent literature is more focused on entrepreneurial intention and personality traits (Cai et al., 2021). Individuals with dark triads of narcissism may have a greater intention to start their own business due to several factors that are associated with narcissism. These factors are related to narcissism, being associated with impulsivity and high-risk tolerance, traits that can be advantageous in the uncertainty of entrepreneurship (Afshar et al., 2025). Narcissists may see navigating new business ventures as opportunities rather than threats. Therefore, research has found that narcissists prefer entrepreneurship (Afshar et al., 2025). Narcissists see entrepreneurship as an ideal area to apply their strategic thinking and manipulative skills for personal gain. They are adept at navigating social and business networks to their advantage and are valuable for securing resources and competitive positioning (Afshar et al., 2025).

Despite an increase in studies examining narcissism within corporate organisations through the lens of narcissistic leaders such as CEOs, CFOs, and other executives, there remains insufficient research on narcissism among UK entrepreneurs, despite the association between entrepreneurial intentions and narcissism (Baldegger et al., 2017). Those with entrepreneurial intentions are more likely to pursue innovation opportunities (Leonelli et al., 2022). Studies have found a positive relationship between entrepreneurial intentions and narcissism traits; individuals with narcissistic traits are more inspired to start their own businesses (Leung et al., 2021a), with recent literature focusing on the "Big Five Personality" and "Narcissism" theory relating to entrepreneurial intention. A body of literature explores how entrepreneurial behaviour influences entrepreneurs' mental outlooks, feelings, and perspectives (Leonelli et al., 2022). Scholars have identified personality as a predictor of entrepreneurial intentions and outcomes. Entrepreneurial intention refers to the entrepreneur's aim to pursue strategies or proposals aimed at product and process innovation to capitalise on the opportunity. Understanding entrepreneurs' personalities is vital for economic growth and

development (Leonelli et al., 2019). The further discussion also examines the correlation within the literature between narcissism and entrepreneurial activities, which extend beyond entrepreneurial intention.

3.8 Narcissism and Entrepreneurial Activities

According to Gartner (1989), entrepreneurship is an individual's decision to work independently and accept risk. A foundational theory originates in the Austrian tradition, which examines the role of knowledge in managing the economy; it considers individual expertise and how it influences actions. The Austrian perspective highlights the entrepreneur as the central figure in the entrepreneurial process. This core function integrates all components related to selling and future transactions. This conceptual framework explores personality traits and considers the effectiveness of narcissism in entrepreneurial efforts. Therefore, the study addresses the literature on entrepreneurship and personality, with a focus on narcissistic traits. Previous research has examined how personality affects entrepreneurial outcomes and activities, but there has been limited discussion on the conceptual framework surrounding the productivity of narcissistic traits in entrepreneurship. The research investigates narcissists and explores the relationship between narcissistic entrepreneurs' traits and entrepreneurial success. Key early-stage activities include product and service development, competitive market strategies, fundraising, marketing and networking, performance management, and learning from failure. Certain personalities identified as effective in entrepreneurial behaviour are compared with narcissism to identify common characteristics, as summarised below.

Narcissism and New Product and Service Development: Recent research has shown that narcissism can have positive effects, such as helping individuals achieve their desired goals and positions (Campbell et al., 2011). The exhibitionist entrepreneur is more likely to take on higher risks and display habits that others often criticise. Entrepreneurs tend to be very confident in their ability to manage risk and show little fear or concern about failure in their communication and behaviour (Leonelli et al., 2019). The narcissistic entrepreneur believes that their skills and talent can handle any threat faced by their ventures and is confident that the risk will present a meaningful opportunity. This increases their self-confidence and leads to bold, decisive strategies despite resource limitations faced by the firm. The entrepreneur's proactiveness also helps in identifying new opportunities for higher returns (Wales et al., 2013).

Narcissism and Market Competitive Strategy: Narcissistic entrepreneurs are business owners who view their businesses as reflections of their own greatness. They may prioritise

short-term gains because they enjoy the attention and admiration of others; entrepreneurs attract attention, which narcissists find gratifying, as a result, they are willing to start a business. Narcissists tend to adopt fast-paced strategies to control their actions and decisions, often driven by a desire to lead and succeed quickly. Entrepreneurs with narcissistic traits allow their beliefs to influence their entrepreneurial opportunities, decisions, and their capacity to create value in a competitive environment (Liu et al., 2021). Their personality also affects networking; particularly in the early stages of entrepreneurship, founders are often eager to undertake market-related tasks. These activities typically involve sales, marketing, and organisational strategy. This can be challenging for start-ups and organisations, impacting their strategy, revenue, and growth (Burger et al., 2023). Research indicates that narcissistic entrepreneurs tend to spend markedly more on marketing and advertising (Hayward et al., 2006). This can be highly effective if executed properly by the narcissist. Founders exhibiting narcissistic traits are more than capable of selling their products (Matthews et al., 2018). However, in industries where personal relationships are essential, the narcissistic entrepreneur may establish chaotic connections that could harm the organisation in the long run.

Narcissism and Performance Management: Research has explored how narcissism affects the entrepreneurial performance process, mainly focusing on financial indicators such as profit, sales, and shareholder value. Most studies in this area examine narcissism from an organisational perspective, analysing narcissistic CEOs, CFOs, and the company's performance through the lens of corporate strategy (Wales et al., 2013). The research indicates that narcissistic CEOs' preferences and perceptions tend to drive them to pursue high-risk, entrepreneurial strategies, which often lead to strong performance and profit growth (Wales et al., 2013). Conversely, in a fragmented and stable market, a narcissistic CEO may diminish the positive link between a firm's entrepreneurial orientation and shareholder value (Engelen et al., 2016). Studies on narcissistic leaders in small and medium-sized European enterprises suggest that narcissism among top executives impacts firm performance, and this relationship may change over time (Kraus et al., 2018). Overall, research shows that narcissistic CEOs and CFOs positively influence the performance of small and medium-sized enterprises.

Narcissism and Learning from Failure: Researchers have long recognised that there is much to learn from failure (Cope, 2011). Conversely, entrepreneurs learn from failure and improve their approach and resilience in entrepreneurship (Cope, 2011). Studies have shown that narcissistic entrepreneurs are often hesitant to admit failure and learn from it; this is particularly challenging for narcissists due to their fragile, high self-esteem, making it even harder to gain insights from the experience (Navis & Ozbek, 2016b). This difficulty is also

driven by the narcissist's inability to cope with failure, as they perceive it as a significant social and psychological blow, compounded by their lack of motivation to learn from such setbacks (Y. Liu et al., 2019). There are two main reasons why narcissism may hinder entrepreneurs from learning from failure. Firstly, the inflated self-image and strong sense of superiority characteristic of narcissists prevent them from accepting failure (Campbell et al., 2011). Secondly, narcissists tend to focus solely on their original vision, ignoring the lessons that could be learnt (Navis & Ozbek, 2016b). Their inherent arrogance and sense of superiority make it difficult for them to acknowledge or derive lessons from their failures (de Vries & Miller, 1985).

Narcissism and External Fundraising/Resource Acquisition: Looks at the importance of resource acquisition and the optimal integration of resources, which are very relevant in the entrepreneurial process. The social exchange theory argues that a narcissistic individual is more successful in the early stage of stakeholder buy-in primarily because of their excellent characteristics, such as extraversion, confidence, and passion (Hmielecki & Lerner, 2016). These traits are evident in their ability to provide psychological security to their team and in their confidence in the venture's success. This somehow strengthens investors' and team trust in supporting the narcissistic entrepreneur. This allows narcissists to exploit social relationships through trust and commitment to acquire funding (Sundermeier et al., 2020). Though these characteristics support the effective acquisition of resources, this may evolve after the opportunity is realised. The positive traits are initially exhibited, which gain the trust and commitment of their team and investors, but over time, will become negative traits such as selfishness, exploitation, and manipulation. This diminishes stakeholders' trust, preventing narcissistic entrepreneurs from establishing long-term benefit exchanges (Wiklund et al., 2018). Researchers have analysed crowdfunding data to examine the impact of entrepreneurs' narcissism on crowdfunding and the outcomes of their teams. The research found that narcissistic entrepreneurs were less likely to succeed in resource acquisition (Butticè & Rovelli, 2020). Crowdfunding research found that narcissistic entrepreneurs prefer setting lower funding goals and longer campaign durations than non-narcissistic entrepreneurs, attracting fewer backers and raising less funding. Though this research shed light on narcissism, entrepreneurs, and resource acquisition, there is a need for further studies on narcissistic personality and its association with resource acquisition, as there is limited research examining the impact of narcissism on venture and fundraising activities.

3.9 Comparison of Narcissism and Big Five Personality

This section will discuss the commonalities and differences between narcissism and the Big Five personality. There are several similarities and differences between narcissism and the Big Five personality. This section will define the terms and clarify the connectedness between narcissism and the five traits: openness to experience, consciousness, extraversion, agreeableness and neuroticism. The Big Five remains one of the dominant personality perspectives in historical work. There is an alignment with the Big Five personality traits explaining narcissism in openness to experience, extraversion, disagreeableness (agreeableness), low conscientiousness and lacking emotional stability (neuroticism) (Rogoza & Piotrowski, 2018a). This section will discuss narcissism and compare it to the Big Five theory. As discussed in the previous section, the main fundamental distinction between the two types of narcissism is between covert and grandiose narcissism. The cover narcissism is highly defensive, demonstrating a high level of insecurity, feelings of inadequacy, incompetence and adverse effect where (Rogoza & Piotrowski, 2018a), while grandiose narcissism looks at grandiosity, arrogance, absorption, and entitlement (Rogoza & Piotrowski, 2018a). Covert narcissism is aligned with clinical outcomes, while grandiose narcissism is aligned with social constructs and related to normal narcissism. With the two forms of narcissism, the thesis is focused on grandiose narcissism. Whenever narcissism is referred to, this is philosophically referring to grandiose narcissism.

Personality traits are described as a relatively stable pattern of behaviour and emotions, and narcissism is positively correlated with high global self-esteem, extraversion, assertiveness, self-enhancement, social potency and goal persistence. Narcissists exhibit common traits and show a positive correlation between the Big Five personality traits of extraversion and openness to experience. Narcissism and extraversion are commonly associated because of the narcissist's ability to demonstrate confidence and social engagement with stakeholders; this is also a common positive trait of entrepreneurs who seek to gain funding. Also, the narcissist's self-belief in their skills and abilities also prepares them and supports the commonality between extraversion and narcissism. Two traits of the Big Five personality that are independently associated with narcissism are extraversion and openness to experience. The literature also discusses differences between narcissism and agreeableness; these are negatively correlated. Which means narcissists are more disagreeable rather than agreeable. The narcissists are also referred to as the 'disagreeable extrovert'. They become more disagreeable as interaction in the relationship progresses, which, over time, may cause

conflict with family, friends, stakeholders, and investors (Rogoza & Piotrowski, 2018a). There are commonalities between openness to experience and admiration, a need for new experiences, and taking risks. Therefore, from the literature, there are commonalities between the personality narcissisms and openness to experience and extraversion. There are references between narcissism and neuroticism, conscientiousness and agreeableness. Within the literature, narcissism is commonly associated with commonality between openness to experience and extraversion, and differences with agreeableness and neuroticism.

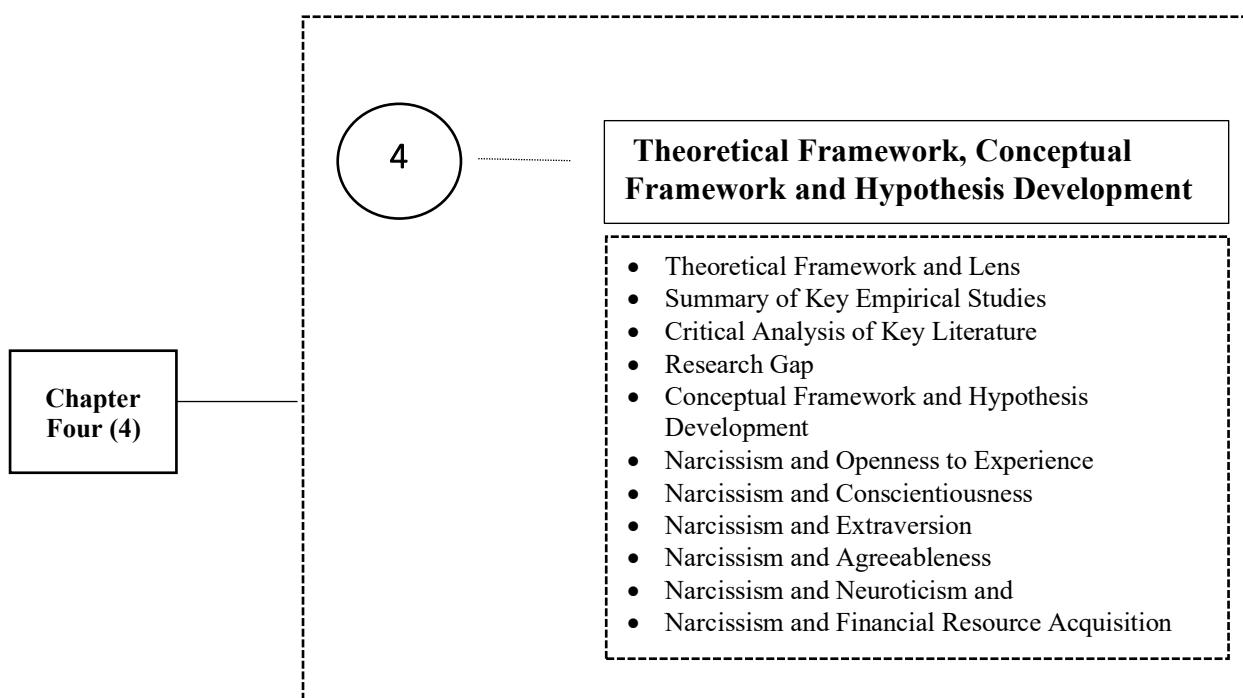
The Big Five personality traits, also known as the two-factor model of personality, have been found to remain stable over time. The background of the theory argues that the two-factor model of personality was first introduced by Digman (1997), who argues that a pattern is not accidental but is based on two complementary areas of personality, which are considered as plasticity (high extraversion and openness to experience) and stability (high agreeableness, high conscientiousness and high emotional stability (low neuroticism). The plasticity trait of the Big Five personality relates to the general understanding of openness to experience, which represents cognitive exploration, and extraversion, which represents behavioural exploration (Rogoza & Piotrowski, 2018a). Stability (low neuroticism), on the other hand, is associated with the ability to function in social interactions, cooperativeness, and honesty. Narcissism, therefore, has been found to share commonalities with the plasticity meta-trait of the Big Five, with high cognitive and behavioural exploration; however, it is the opposite with the stability meta-trait, as they are likely to be very unstable. This research explores the association between the Big Five theory commonalities and differences and evaluates the impact on the financial resources acquisition stage. The most basic goal of the narcissist is to rely on extraversion as they need a social audience.

CHAPTER FOUR (4): THEORETICAL FRAMEWORK, CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

4.1 Introduction

The relationship between narcissism and entrepreneurship began receiving attention in 2013. Before this, the literature on personality focused on the Big Five theory (Leung et al., 2021a). Narcissism influences each stage of the entrepreneurial process, cognitive, behavioural, and motivational for entrepreneurial activities and outcomes (Leung et al., 2021). However, research has shown that narcissistic entrepreneurs are interested in starting their businesses instead of working within an organisation. This research examines and challenges the literature on whether narcissists are “productive” or “unproductive” in entrepreneurial activity, particularly in resource acquisition in SMEs. This research intends to bridge this research gap by examining narcissism and personality amongst entrepreneurs within the UK, and its impact on the financial resource acquisition process. This chapter examines and discusses the conceptual framework being developed based on examining the critical literature review. This section also discusses the research gap in detail and develops hypotheses for empirical research. The chapter then discusses the research gap by examining the Big Five theory and narcissism, as well as the literature on the proposed hypothesis. The conceptual framework addresses the research questions and objectives discussed in the earlier chapters. This chapter also discusses the theory of narcissistic behaviour in financial resource acquisition and preference for funding.

Figure 8: Structure of Chapter Four (4)



4.2 Theoretical Framework and Lens

Narcissism and Big Five Theory

The research adopts multiple theoretical lenses, including psychological and business organisation theory, and employs a triangulation theoretical approach to develop a hypothesis and framework. Theoretical triangulation involves using multiple theories and hypotheses to examine a study or phenomenon (Thurmond, 2001). This is used when conducting a study with multiple lenses and questions in mind. This also develops confidence in the outcome. In recent years, entrepreneurship has been a topic of great concern. Previous research has yielded findings on entrepreneurial skills, knowledge, and abilities, focusing on entrepreneurs' Big Five personality traits: entrepreneurial cognition, emotion, attitudes, identity, environment, and culture. The outcome of Big Five personality research related to understanding the Big Five theory of personality traits, openness to experience, conscientiousness, extraversion, agreeableness and neuroticism, as the most successful predictors of entrepreneurial outcome(Botha & Sibeko, 2024a). Most studies on narcissism and the Big Five personality were conducted in universities; based on the outcome, the literature confirms a high association between narcissism and extraversion; this relationship is relatively stable over time across the studies(Rogoza & Piotrowski, 2018b).

Continued research is being conducted on the personality traits considered dominant among entrepreneurs to understand their drivers and motivators (Botha & Sibeko, 2024a). Some studies focused on understanding personality traits and the likelihood of predicting entrepreneurial success. Success in entrepreneurship has been a difficult concept to define. However, the literature has focused on how entrepreneurial personality predicts entrepreneurial behaviours (Botha & Sibeko, 2024a). At the same time, research emphasises the relationship between entrepreneurial behaviour and the Big Five traits, with extraversion and agreeableness identified as the most significant predictors (Botha & Sibeko, 2024a). The research will extend the theoretical foundation of narcissistic personality. It is important to examine narcissism in alignment with the existing theoretical framework on personality, the Big Five personality. The research will now introduce the association with the Big Five theory; according to the existing literature, extraversion and narcissism are characterised by low agreeableness, with other Big Five personalities playing a supporting role (Rogoza & Piotrowski, 2018).

4.3 Summary of Key Literature

This section summarises the key published research on entrepreneurial finance and narcissism within academia. These were the key findings from the literature review: the articles were examined in alignment with the research context and theoretical framework to develop the conceptual framework, and a hypothesis was then formulated for the empirical framework, which will be discussed later. The research used key literature on finance, entrepreneurship, and narcissism to narrow the relevant literature, provide the contextual background, and identify the research gap. Table one (1) summarises the critical research papers discussing the relevance of narcissism and personality in resource acquisition.

Table 1: Summary of Research Articles

The Narcissist Wallet: The Nexus between Narcissism and Financial Decision-Making among Aspiring Entrepreneurs (Badloe & Janssen, 2023)	
Purpose / Research Focus	
	<p>The research focuses on narcissism in aspiring entrepreneurs and the impact of receiving financial influences; the study also looks at the relationship between age and gender moderation. The hypothesis developed within this study was centred around the following:</p> <ul style="list-style-type: none"> — Aspiring entrepreneurs with more narcissistic traits are more likely to choose funding without external influence. — Aspiring entrepreneurs with lower narcissistic traits are likelier to choose funding options with external influence. — Younger aspiring entrepreneurs with high levels of narcissistic traits are more likely to choose funding options with no external influence compared to older aspiring entrepreneurs — Younger aspiring entrepreneurs with high levels of narcissistic traits are more likely to choose funding options with external influence compared to older aspiring entrepreneurs. — Male aspiring entrepreneurs with high levels of narcissistic traits are more likely to choose funding options with no external influence compared to female entrepreneurs.

	— Male aspiring entrepreneurs with high levels of narcissistic traits are more likely to choose funding options with external influence compared to female entrepreneurs
Methodology:	Methodology: The data was collected using online surveys. The study took a positivist approach using deductive reasoning and quantitative research methods. It was done in Sweden and the Netherlands. The Scales used within the survey were NPI16, and the Sample Size was 75.
Findings	The study established that narcissism impacts the choice of finance among aspiring entrepreneurs. Therefore, entrepreneurs who score high on narcissism are more likely to prefer financial resources that do not introduce an external influence into the business. The results found that age and gender play a moderating role in this relationship, suggesting the effect of narcissism on entrepreneurial finance.
Limitation	One limitation of this study is that the NPI-16 does not perfectly represent the NPI-40 scales. With a sample size of 75 aspiring entrepreneurs, this may limit generalisability. The small sample size has also impacted the statistical power.
Areas for Further Research	A longitudinal study is necessary to gain more comprehensive insights into financial preferences and how these change over time. Future studies could focus on the cultural diversity of entrepreneurs.
“Fund Me I am Fabulous” Do Narcissistic Entrepreneurs succeed or fail in crowdfunding? (Buttice & Rovelli, 2020)	
Purpose / Research Focus	Previous attempts have been made to investigate the consequences of an entrepreneur's narcissistic personality in the context of crowdfunding. According to behavioural theory, individuals are more likely to succeed when they meet the specific expectations of that role. Narcissists are creative, charismatic, strong and self-reliant; they are also arrogant, aggressive and unstable, off-putting, filled with entitlement. This paper examines whether the industry in which entrepreneurs launch crowdfunding campaigns affects the relationship between their personality and crowdfunding success. The rationale is that potential crowdfunding backers' expectations of successful entrepreneurs may

	differ across contexts, and thus a narcissistic personality may be valued more in some industries than others.
Methodology:	The study includes 59,538 crowdfunding campaigns launched by individual entrepreneurs on the Kickstart platform. An econometric analysis identified the dependent variable (success), which measures the crowdfunding campaign's success in raising the target capital. The primary independent variable is narcissism, which was operationalised using first-person pronouns.
Findings	The research investigates the relationship between entrepreneurs and crowdfunding success using a large-scale quantitative analysis. The research found that narcissism is negatively related to crowdfunding success. The study did highlight some findings that will contribute new knowledge to the literature by examining the entrepreneurial context. The result is that the penalisation for narcissism varies depending on the entrepreneurial context in which the entrepreneur sets their venture.
Limitation	There are several limitations to this study. One limitation was that the sample focused only on reward-based crowdfunding from a single platform. Data from a single platform needs to be examined to generalise the results.
Areas for Further Research	Further research should be extended to include additional crowdfunding platforms. Further crowdfunding research should utilise the NPI 40 studies that focus on the narcissism personality test and not the pronouns.
Narcissistic rhetoric and crowdfunding performance: A social role and theory perspectives (Anglin, Wolfe, et al., 2018)	
Purpose / Research Focus	The research paper focuses on the extent to which the use of Narcissistic rhetoric- language reflective of narcissism characteristics – influences the ability to raise funds via crowdfunding. Also, how do one's sex, sexual orientation and race alter the influence on crowdfunding? Successful entrepreneurs convey characteristics such as confidence and strength. The paper examines narcissistic characteristics, in addition to the knowledge that investors often base their investment decisions on

	<p>positive and negative perceptions of entrepreneurs; the entrepreneurs' display of narcissism may be an essential factor in shaping investor perceptions and, ultimately, whether funding is obtained. Narcissism has both positive and negative outcomes; among the former is entrepreneurial intention. The research examines the following hypothesis.</p> <ul style="list-style-type: none"> — H (1) Narcissistic rhetoric will have a curvilinear, inverted U-shaped relationship with crowdfunding performance. — H (2) An entrepreneur's sex positively moderates the curvilinear relationship between narcissistic rhetoric and crowdfunding performance such that the males will experience more excellent performance from using narcissistic rhetoric before the relationship between narcissistic rhetoric and crowdfunding performance becomes negative. — H (3) An entrepreneur's sexual orientation positively moderates the curvilinear relationship between narcissism rhetoric and crowdfunding and crowdfunding performance such that those who identify as LGBTQ will experience more excellent performance from using narcissism rhetoric than non -LGBTQ individuals before the relationship between narcissism rhetoric and crowdfunding performance becomes negative. — H (4) An entrepreneur's race can negatively moderate the curvilinear relationship between narcissistic rhetoric and crowdfunding performance such that racial minorities will experience lower performance when using narcissistic rhetoric than crucians, and the relationship between narcissistic rhetoric and crowdfunding performance becomes negative.
Methodology:	<p>The research includes the examination of 1863 crowdfunding. The study consists of over 1800 observations. The sample was taken from a Kickstarter platform. This is a platform that provides over £ 3.4 billion. Total Sample of 1895, with 32 with incomplete data, leaving 1863. The NPI scale used is NPI 40 for the Narcissism measure. Exploratory Factor Analysis</p>

Findings	<p>The study explores the role of narcissistic rhetoric in entrepreneurial funding and advances understanding of how it impacts crowdfunding performance, using various empirical approaches.</p> <ul style="list-style-type: none"> — Hypothesis 1 was supported, where there is an inverted shape relationship between narcissistic rhetoric and crowdfunding performance. — Hypothesis 2 was not supported. The research found no more significant benefit from being male when using narcissistic rhetoric and crowdfunding performance. None of the sex-related moderators was statistically significant. — Hypothesis 3, where the sexual orientation of LGBTQ individuals was expected to be higher than that of non-LGBTQ individuals, was not significantly supported. — Hypothesis 4 looks at racial minorities and lower performance when using narcissistic rhetoric; it was observed that Caucasians accrue more benefit from narcissistic rhetoric at all levels. Therefore, hypothesis four was supported. <p>Overall, the research concludes that narcissistic rhetoric enhances crowdfunding performance. Narcissism may be beneficial or harmful to important entrepreneurship.</p>
Limitation	<p>The study focuses on narcissistic language and its association with crowdfunding. However, the study does not directly assess how narcissism as a personality trait relates to crowdfunding.</p>
Areas for Further Research	<p>There is still a need to understand the narcissism personality trait and the Big Five personality traits, and how closely related they are to crowdfunding. The research could be extended to political capital or the Big Five personality traits, and further research could examine how investors influence narcissistic entrepreneurs' rhetoric.</p>
<p>Does the personality of micro-enterprise owners matter in the relationship between startup capital and entrepreneurial success? (Martin et al., 2016b)</p>	
Purpose / Research Focus	<p>This study examines the moderating effect of the Big Five significant personality factors on the relationship between startup capital and entrepreneurial success. This study examines the Big Five personality</p>

traits. The research examines how agreeableness and extraversion positively and negatively predict entrepreneurial success, whereas neuroticism negatively predicts it. The research found that extraversion is the only Big Five factor that moderates the relationship between start-ups and entrepreneurial success, highlighting the importance of interpersonal skills in microenterprises. The study also discusses implications for research, entrepreneurial education, and support for startup capital. The research was conducted to bridge the gap in understanding the reasons for most entrepreneurial venture failures: the inability to raise capital. Most small businesses rely on their own funding, family, and friends as their primary sources of support. Microenterprise's resources primarily include personal funds, business knowledge and skills, small bank and family and friend loans, and support. Research has found that entrepreneurial failure results from limited access to funding. The research focused on the hypothesis below.

- Hypothesis 1: Start-up capital will positively predict entrepreneurial success.

The paper also examines the Big Five personality theory. Extraversion requires social interaction, and entrepreneurs spend much time interacting with various stakeholders. Entrepreneurship is attractive to this personality type as it involves domination, pleasure-seeking, impulsiveness, and self-confidence.

- Hypothesis 2a: Extraversion will positively predict entrepreneurial success.
- Hypothesis 2b: Extraversion will positively moderate the startup capital-entrepreneurial success relationship.
- Neuroticism is one of the traits that can be labelled as a dark personality trait. This is the tendency to be emotionally unstable, and it includes experiencing fear, sadness, anger, and hostility. These personalities are also sensitive to negative feedback and anxious in response to difficult situations.

	<ul style="list-style-type: none"> — Hypothesis 3a Neuroticism will negatively predict entrepreneurial success. — Hypothesis 3b Neuroticism will negatively moderate the relationship between startup capital and entrepreneurial success. — Openness to experience is the personality that appreciates and purposefully seeks appreciation. These individuals are more open to others' contributions and values. These entrepreneurs are more likely to question the ways things are being done. — Hypothesis H4a Openness to experience will positively predict entrepreneurial success. — Hypothesis H4b Openness to experience will positively moderate the relationship between startup capital and entrepreneurship. — Hypothesis 5a. Agreeableness will positively predict entrepreneurial success. — Hypothesis 5b Agreeableness will positively moderate the startup capital and entrepreneurial success.
Methodology:	<p>The study sampled 374 microenterprise owners from major trading hubs in Uganda. Most participants were male youths (52%), with an average age of 31. The participants had a relatively high level of education (35.8%). Participants were from various industries, including retail trade, financial services, hotel and food service, manufacturing, and health. The research used moderated multiple regression. The model looks at whether start-up capital predicts entrepreneurial success. The research uses a moderated multiple linear regression analysis.</p>
Findings	<p>The study examines the moderating effect of personality on start-up and entrepreneurial capital. Findings showed that start-up capital is a significant predictor of entrepreneurial success. The research also found that extraversion positively predicts entrepreneurial success, and agreeableness was the best predictor. Openness to experience negatively predicts entrepreneurial success. Conscientiousness and neuroticism were non-significant predictors of entrepreneurial</p>

	success. The model reveals that the Big Five personality traits were 26% predictors of entrepreneurial finance.
Limitation	The research has two main limitations. The first is that the findings from the sample used in the research cannot be generalised, as the design was cross-sectional and focused on micro-entrepreneurs. The second limitation is that the scale used within the research is a self-rating by participants. The participants may overemphasise their positive attributes, especially when measuring business success.

4.4 Critical Analysis of Key Literature

From a review of the literature on narcissism, there is evidence that narcissists are likely to become entrepreneurs based on the theory of entrepreneurial behaviour and entrepreneurial intentions. There are some commonalities between the personality traits of narcissists and the need to start a business. One of the core strengths of recent literature is the more rigorous research that connects the theory of narcissism and entrepreneurship and identifies commonalities among personalities that may pursue entrepreneurship. However, one of the criticisms is that most literature focuses on the destructive traits of the narcissist and their likelihood to destroy the venture in the latter days through poorly managed relationships due to their manipulative nature. This is a relevant weakness of narcissism, which must not be ignored; however, with the modern era following COVID-19, where most entrepreneurs are primarily exploring social media and digital sales, the personality behind the business is now shining a light on narcissism and may require more exploration on how to support this personality type. Therefore, there is now a need to explore the positive side of narcissism in entrepreneurship with support for mitigating the destructive side.

The theory also speaks to the narcissist's sociability, which can be advantageous for selling business ideas through their network and for acquiring funding. The literature identifies risk-taking, extraversion, and openness to experience (intellect). From the key literature, it was evident that there is limited research that focuses on narcissism and financial resource acquisition and whether narcissism is associated with and moderated by their personality in receiving funding. There is also limited research on quantitative analysts and empirical results within this research gap. Another critical review of the literature is that several studies on narcissism and entrepreneurial finance focus primarily on business school students rather than entrepreneurs who have gone through the funding process. Additionally,

limited research examines actual SME entrepreneurs in the UK and how personality influences the financial resource acquisition process.

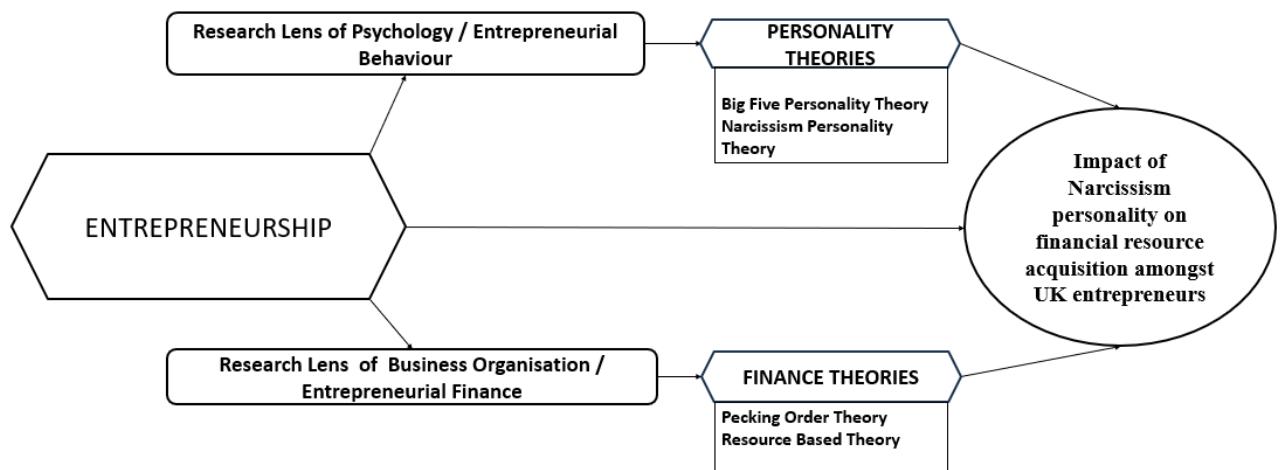
4.5 Research Gap

Individual characteristics matter in the context of entrepreneurial finance; this is a widely accepted notion by industry and academia. Currently, most publications in entrepreneurial finance have focused on the directly observable elements of individual human and social capital, including gender, ethnicity, education, business and professional backgrounds. These observable elements are critical factors; however, personality traits provide a richer characteristic in determining a person's character (Anglin et al., 2018). A large body of literature has examined the relationship between entrepreneurial behaviour and entrepreneurial intentions, with particular attention to personality traits that inspire one to become an entrepreneur. The literature looks at traits such as the Big Five theory, openness to experience, conscientiousness, extraversion, agreeableness and neuroticism and how this relates to entrepreneurial behaviour, theories such as the five (5) dimensional constructs, autonomy, innovativeness, risk-taking, competitiveness, aggressiveness and proactiveness, as previously discussed in earlier chapters. Although much of the literature focuses on entrepreneurial personality traits, no research has been conducted or published to examine narcissism, its association with the Big Five personality traits, and financial resource acquisition within the UK, or whether entrepreneurs who are narcissistic, extroverted, and open to experience are more successful at acquiring external funding.

Among the limited literature and publications on narcissism, there has been little focus on personality traits and entrepreneurial finance. Most studies primarily concentrate on the Big Five theory, risk-taking, and the destructive aspects of narcissism. The literature on personality traits primarily examines the Big Five traits and the intention to start a business. Publications within the UK entrepreneurial ecosystem predominantly address these topics. However, only a few studies explore personality factors such as narcissism and their influence on raising capital during the start-up stage of SMEs. There is limited or no research investigating the mediating role of the Big Five personality traits, narcissism, preferences for internal or external funding, and whether narcissism can positively influence success in securing funding in the UK. The field of entrepreneurship has recognised the role of personality traits in shaping individuals' likelihood of becoming entrepreneurs, as reflected in entrepreneurial intentions. The entrepreneurial finance literature has examined theories such as the pecking order theory and resource-based view, alongside investor behaviour in early

stages. This research aims to fill a gap in the literature by contributing knowledge about entrepreneurs' personal characteristics and how their Big Five traits and narcissism influence their external financing decisions, including preferences for internal versus external funding and their success in fundraising.

Figure 9 A Graphical representation of the Research Gap Through Theoretical lenses



4.6 Conceptual Framework and Hypothesis Development

The role of personality traits in entrepreneurship has remained under-researched. This study's main research objective is to contribute to the existing knowledge by examining the impact of personality traits on entrepreneurial finance (Salameh et al., 2022). Personality traits were studied to assess how individual characteristics influence entrepreneurial intentions (EI). Previous research has established a relationship between personality traits and entrepreneurship (Salameh et al., 2022). The five-factor model of personality, known as the "Big Five" theory by Goldberg (1990), provides a unifying taxonomy for the study of personality, which is essential for communication and empirical research (Cable & Judge, 2003). The five-factor structure has been generalised across cultures and is rated based on self, peer, observer, and stranger assessments; there is significant evidence that the Big Five are heritable and stable over time. Openness to experience relates to imagination and innovation, and literature has concluded that this trait correlates with high entrepreneurial intentions and activities (Schumpeter, 2017). Extraversion, which reflects a tendency toward sociability, assertiveness, expressiveness, and activity, is also prominent. Agreeableness indicates a tendency to be likeable, accommodating, adaptable, and cooperative. Conscientiousness involves traits such as achievement, organisation, task focus, dependability, efficiency, and practical thinking, which have been positively associated with

entrepreneurial traits. Neuroticism refers to a tendency toward insecurity, emotional instability, and heightened sensitivity to experience (Aboubaker Ettis, 2016). Emotional stability, on the other hand, denotes a tendency to be secure, emotionally balanced, and resilient, with a disposition towards imagination, artistry, and autonomy.

Openness to Experience includes those described as imaginative, original, unconventional, and artistic. Of the Big Five, openness is the best predictor of creative and scientific creativity (Costa, 1992). Inspiration is closely linked to creativity, and individuals who score high in openness to experience should be more likely to use inspirational appeal as an influence tactic than those who are uninspired, predictable, and unimaginative. Open individuals are considered non-conforming, divergent, autonomous, and independent (Cable & Judge, 2003). Entrepreneurs who score high in openness to experience traits are not anxious about new challenges; they also have a high level of creativity and thinking. Entrepreneurs explore revolutionary ideas and utilise creativity to address all challenges related to entrepreneurial finance. Openness to experience plays a significant role in awareness of opportunities, including the opportunity to source finance (Salameh et al., 2022).

Conscientious individuals are ambitious, practical, task-focused, persistent, playful, careful, and organised. Those individuals scoring high on conscientiousness would be more likely to use relational persuasion, gathering factual evidence and presenting it. These individuals are ambitious, practical, task-focused, persistent, patient, careful, and organised. This trait is more likely to use personal persuasion. (Costa, 1992). Conscientious individuals are also considered less likely to use persona appeal, as it is based on friendship and personal favours rather than task-focused productivity (Cable & Judge, 2003). Highly conscientious individuals establish their work, set goals, plan, and continue to perform excellently. These individuals are more likely to become entrepreneurs than those low in the conscientious trait (Salameh et al., 2022). These traits pertain to a person's diligence, adherence to guidelines and processes, and a persistent desire to maintain high-performance standards. Conscientious entrepreneurs strive for success and are determined to achieve it, supported by a solid understanding of responsibility that fosters their dependability at work. This trait has been known for its vital contribution to organisations and entrepreneurship (Salameh et al., 2022).

Neuroticism refers to individuals who score low on neuroticism and demonstrate emotional stability. Those individuals are calm, secure, and not nervous. Those who score high on measures of Neuroticism are likely to be anxious, emotionally embarrassed and

depressed (Judge et al., 2003). The perspective of emotional stability appears relevant to two types of influence tactics: rational persuasion and inspirational appeal. This means that calm, secure, and stable people are more likely to use logic and rational persuasion when influencing others. Entrepreneurs who score high in neuroticism show regular mood swings, recklessness, self-cognisance, arrogance, and depression (Salameh et al., 2022). The literature demonstrates that entrepreneurs strongly believe and confidently govern potential environmental consequences; this trait is associated with a low level of neuroticism. Entrepreneurs challenged by problematic circumstances in resource management, which are already scarce even under pressure from stakeholders, are willing and capable of showing a pointless measure of optimism and emotional intelligence when managing limited financial resources. On the other hand, those high in neuroticism are terrified by the challenge and fear the possibility of failing (Salameh et al., 2022).

Agreeableness is a dimension of interpersonal behaviour; these individuals are altruistic, warm, generous, trusting, and cooperative. Research has shown that agreeableness is negatively related to aggression and hostility. (Cable & Judge, 2003). These individuals preferred conflict resolution tactics and would most likely employ legitimising tactics. Entrepreneurs are more likely to demonstrate higher competitiveness than other business owners, reflecting a lower level of agreeableness. Those considered agreeable are trusting, cooperative, polite, and usually thoughtful. Agreeable people are more likely to take social work occupations and less likely to become entrepreneurs (Salameh et al., 2022).

Extraversion is characterised by sociability, dominance, and positively correlated emotionality, such that the extraverted person is talkative and expressive and enjoys interacting with others, which is very beneficial in social experiences. Extraverted individuals are likely to utilise personal and inspirational appeal. These involve engaging with others in a positive and friendly manner (Watson & Clark, 1997). Theories have already outlined the traits of extroverts as assertive, indicating that they are more inclined to be assertive and influence behaviour rather than being passive or defensive. Moreover, extroverts are reward-sensitive, making it more probable for them to deploy reward-based tactics (Cable & Judge, 2003). SMEs with entrepreneurs and owners scoring high on extraversion are more likely to secure external funding successfully. Personal characteristics are crucial throughout the entrepreneurial process (Aboubaker, 2016). Extraversion reflects the entrepreneur's ability to visualise; these entrepreneurs are generally prepared and capable of maintaining contact with all stakeholders. Such more extroverted entrepreneurs tend to attract investor support, which is vital for developing networks (Salameh et al., 2022). It has

also been observed that extroverted individuals are more drawn to entrepreneurship (Costa et al., 1984).

The Big Five factors have been researched in entrepreneurship and demonstrated entrepreneurial competency. For many decades, entrepreneurship has been linked to the Big Five theory. Therefore, the research needs to map the common traits between the Big Five theory and narcissism. Narcissism is expected to have similarities across the big five models, with extraversion and openness to experience. The combination of narcissism and Big Five personality traits provided a framework for understanding personality traits in entrepreneurship (Zajenkowski & Szymaniak, 2021). Research has established a positive correlation between narcissism, extraversion, and openness to experience.

4.7 Narcissism and Openness to Experience

This trait is related to intellectual curiosity, proactively seeking experience and imagination (Reed et al., 2004). Openness to experience is also linked to intellect and high IQ. There is a positive relationship between grandiose narcissism and intellect, which is more vital with openness to experience. Intellect refers to the ability to engage with abstract information, and narcissists quickly understand it (DeYoung et al., 2007). The narcissist's inflated self-image means the narcissist will likely score high in intellect. Research has found a positive relationship between narcissism and intellect (Zajenkowski et al., 2016a). Prior research shows no relationship between narcissism and intellect (Zajenkowski et al., 2016a). Entrepreneurs who score high in openness to experience traits are not anxious about new challenges; they also have a high level of creativity and thinking. Entrepreneurs explore revolutionary ideas and utilise creativity to address all challenges, including entrepreneurial finance. Openness to experience plays a significant role in the awareness of opportunities throughout the entrepreneurial process (Salameh et al., 2022). Entrepreneurs open to experience are more unconventional and more likely to succeed in fundraising activities (Martin et al., 2016). Hence, the proposed hypothesis:

Hypothesis 1 (H1): Null and Alternative

- **H₀₁:** There is no significant association between narcissism and openness to experience amongst UK entrepreneurs.
- **H₁₁:** There is a significant association between narcissism and openness to experience amongst UK entrepreneurs.

4.8 Narcissism and Conscientiousness

This trait pertains to individuals who can organise, plan, and establish their work by setting goals. They are more inclined to pursue entrepreneurship than those low in conscientiousness (Hogan & Ones, 1997). Individuals with this trait are industrious and diligent; they may adhere to guidelines and processes (Wang et al., 2016). They are usually eager to strive for success, determined to achieve their goals, and very likely to succeed with solid knowledge in their field, enabling them to work efficiently and effectively. This trait reflects competency, self-discipline, confidence, and dependability (Watson and Newby, 2005). Individuals high in conscientiousness can manage ventures that require a high level of psychological capital (Luthans et al., 2007). Very little research has been conducted on entrepreneurship and conscientiousness in relation to narcissistic personality and financial decisions. A high level of conscientiousness among entrepreneurs is often associated with low risk aversion; this personality trait is not typically associated with high risk-taking and, therefore, is likely to have a negative correlation with narcissism (Irfan & Shahid, 2021). In the field of entrepreneurship, conscientiousness is positively related to the long-term survival of ventures; however, when destructive narcissistic behaviours are present, entrepreneurs are likely to be less conscientious, although further research is needed to understand the relationship between conscientiousness and narcissism better (Ciavarella et al., 2004). Hence, the proposed hypothesis:

Hypothesis 2 (H2): Null and Alternative

- **H₀₂:** There is no significant association between narcissism and conscientiousness amongst UK entrepreneurs.
- **H₁₂:** There is a significant association between narcissism and conscientiousness amongst UK entrepreneurs.

4.9 Narcissism and Extraversion

Extraversion is linked to enthusiasm, sociability, and a tendency to experience positive emotions in anticipation of rewards. It can be noted that narcissism is positively associated with extraversion, as both are high in assertiveness. A key characteristic of narcissism is agency and social dominance within a social environment (Campbell & Foster, 2007). It was found that individuals high in narcissism tend to be more assertive and dominant in

interpersonal relationships (Pincus et al., 2009). Narcissists use self-assertiveness and aggression to resolve conflicts. Narcissism is also positively related to extraversion, high levels of well-being, positive emotionality, and enthusiasm (Sedikides et al., 2004). Business owners with high extraversion are more likely to successfully secure external funding for their ventures. Understanding individual characteristics is essential to fully grasp the entrepreneurial process (Aboubaker Ettis, 2016). Extraversion reflects the charismatic image of the entrepreneur. Such entrepreneurs are usually prepared and capable of maintaining connections with all stakeholders. These more extroverted entrepreneurs tend to attract investor support, a vital trait in developing networks (Salameh et al., 2022). It has been observed that extroverted individuals are more drawn to entrepreneurship (Costa et al., 1984). Entrepreneurs often spend significant time engaging with various stakeholders, which appeals to extroverts as it aligns with traits such as self-confidence, adventure, dominance, pleasure-seeking, ambition, and impulsiveness (Holland, 1997). Extraversion also enhances entrepreneurs' success in business leadership. Business leadership requires entrepreneurs to be active, enthusiastic communicators, negotiators, marketers, and networkers. Hence, the proposed hypothesis:

Hypothesis 3 (H3): Null and Alternative

- **H₀₃:** There is no significant association between narcissism and extraversion amongst UK entrepreneurs.
- **H₁₃:** There is a significant association between narcissism and extraversion amongst UK entrepreneurs.

4.10 Narcissism and Agreeableness

This trait demonstrates behaviours such as trust, cooperation, and politeness towards others. Individuals with these personality traits are usually lenient and thoughtful and follow morals and ethics (Brandstätter, 2011). This personality focuses on public matters, such as social work and the common good, and is less concerned with competitiveness and assertiveness. Research has linked a high level of agreeableness to an inability to succeed in business contexts, such as entrepreneurship (Schröder et al., 2011). The narcissistic entrepreneur may exhibit extroverted behaviours, which are likely to create a positive first impression; however, over time, the narcissist may become very disagreeable with others, leading to difficulty maintaining a favourable reputation (Brownell et al., 2021). Narcissistic

entrepreneurs with dark traits, such as risk-taking, may exhibit impulsive decision-making, including financial decisions. Agreeableness can predict risk-taking behaviours: narcissistic entrepreneurs may be highly impulsive, while those who are agreeable are likely to be less impulsive. Hence, the proposed hypothesis:

Hypothesis 4 (H4): Null and Alternative

- **H₀₄:** There is no significant association between narcissism and agreeableness amongst UK entrepreneurs.
- **H₁₄:** There is a significant association between narcissism and agreeableness amongst UK entrepreneurs.

4.11 Narcissism and Neuroticism

Those who are highly neurotic are more likely to experience mood swings, recklessness, arrogance, self-cognisance and depression (Irfan & Khar, 2021). This trait is identified as a “dark” personality and includes feelings such as fear, sadness, anger and hostility (Zhao et al., 2010). The literature indicates that entrepreneurs strongly believe in governing consequences in their environment (Simon et al., 1991), a trait associated with low neuroticism (Pittaway and Cope, 2006). Entrepreneurship requires taking personal responsibility, narcissism, and facing adversity. A negative relationship exists between neuroticism, entrepreneurial success and risk-taking (Sinha & Srivastava, 2013). Entrepreneurs who face challenges in their businesses, such as resource management and shareholder influence, are likely to experience a range of emotions at different stages of the venture. Narcissistic entrepreneurs may show optimism and emotional intelligence, as they are usually terrified of failing in their venture. Narcissistic entrepreneurs demonstrate less neuroticism when faced with uncertainty and the risk of managing a venture (Bukhari et al., 2023). Based on this analysis, the proposed hypothesis:

Hypothesis 5 (H5): Null and Alternative

- **H₀₅:** There is no significant association between narcissism and neuroticism amongst UK entrepreneurs.
- **H₁₅:** There is a significant association between narcissism and neuroticism amongst UK entrepreneurs.

Based on the literature review on the Big Five theory, there are strong arguments that personality traits have a significant relationship with narcissism, and therefore, propose hypothesis six (H6).

Hypothesis 6 (H6): Null and Alternative

- **H₀₆:** There is no significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs.
- **H₁₆:** There is a significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs.

4.12 Narcissism and Financial Resource Acquisition

Resource acquisition, optimal use, and integration are vital to the entrepreneurial process. Social exchange theory posits that a narcissistic individual is more successful in the early stages of stakeholder buy-in, which enables them to access finance. This advantage is mainly due to their core characteristics, such as extraversion, confidence, and passion (Hmielecki & Lerner, 2016), which influence financial providers. These traits offer psychological security for the team and foster confidence in the venture's success. As a result, investors' trust in the proposed enterprise is strengthened, making them more willing to support narcissistic entrepreneurs despite high financial risks. It is suggested that social relationships foster trust, thereby increasing the likelihood of securing funding (Sundermeier et al., 2020). Narcissists develop these traits over time, especially when previous successes enhance their access to resources for their enterprise. Initially, the positive traits of narcissists help them gain trust and commitment from both their team and investors. However, over time, negative traits such as selfishness, exploitation, and manipulation may emerge, eroding stakeholders' trust and preventing narcissistic entrepreneurs from establishing long-term benefits (Wiklund et al., 2018). Analysis of crowdfunding data indicates that entrepreneurs' narcissism has an insignificant impact on outcomes. Narcissistic entrepreneurs tend to be less successful in resource acquisition (Butticè & Rovelli, 2020). The research on crowdfunding further reveals that narcissistic entrepreneurs prefer setting lower funding targets and longer campaign durations than non-narcissistic counterparts, attracting fewer backers and less funding. These findings suggest that, because venture capital funds typically provide larger loans, entrepreneurs with narcissistic tendencies are less likely to succeed in securing this form of finance. Although current research on narcissistic entrepreneurs and their resource acquisition capabilities remains inconclusive, further studies are warranted to thoroughly examine how narcissistic traits influence venture success and funding outcomes. The impact of narcissism on entrepreneurial activity remains primarily under investigation; thus, determining whether an entrepreneur's success in securing finance or resources stems from narcissistic traits or other factors is challenging. Entrepreneurial behavioural theories indicate that entrepreneurship is multifaceted; narcissism alone cannot fully explain success in

securing finance. Nonetheless, the role of narcissism has gained prominence because some successful entrepreneurs display narcissistic traits. Therefore, understanding how such entrepreneurs lead entrepreneurial activities is of considerable interest (Burger et al., 2023).

Does a narcissistic entrepreneur prefer external or internal funding? In the early stages of an enterprise's life, the entrepreneur is the sole driving force behind the business, deciding whom and where to approach for financial resources and how to use the funds to develop and grow their venture (Dulbecco & Garrouste, 1999). The narcissistic entrepreneur tends not to be directly linked to the pecking order hypothesis (POH), introduced in 1986 by Myers. Still, certain traits, such as narcissism, influence their choice of funding sources. An entrepreneur with narcissistic traits would prefer independence in decision-making and, therefore, is more likely to choose internal funding over equity, as equity requires accountability and the disclosure of financial and strategic information. This is due to the challenges posed by information asymmetry when acquiring external funding, with investors demanding a premium for their investment. Consequently, start-ups are usually financed internally rather than externally because their primary value is intangible and they lack a track record of performance, which hampers their ability to attract potential investors (Badloe & Janssen, 2023). Research suggests that narcissistic entrepreneurs may prefer less debt within their firm's financial structure, as debt correlates positively with the need for collateral, which can constrain narcissistic behaviour (Badloe & Janssen, 2023). In this context, the narcissistic entrepreneur must weigh the trade-offs based on the trade-off theory, deciding between debt for tax advantages and the potential financial disadvantages or distress it may cause. There is also a trade-off between external funding and loss of ownership and control, as a narcissistic entrepreneur may be reluctant to relinquish power to outsiders (Badloe & Janssen, 2023). External funding often entails high monitoring costs from investors. For this reason, scholars argue that entrepreneurs might prefer internal funding and debt as substitutes for equity finance. Resource acquisition is vital for the creation and continuation of ventures, and current research shows that narcissists leverage social connections and pursue power through social status (Badloe & Janssen, 2023). The charisma of narcissists makes them highly skilled in acquiring financial resources (Brunell et al., 2008). They tend to succeed in gaining the confidence of early stakeholders due to positive traits such as extraversion and openness to experience (Badloe & Janssen, 2023). During the initial phase of resource acquisition, narcissists often excel because of their charisma and ability to project trust, security, and value in the opportunity (Liu et al., 2021). Furthermore, the trait of extraversion, linked with both narcissism and the Big Five personality traits, enables narcissists to make strong impressions

and persuade stakeholders to engage in fundraising activities (Carlsson et al., 2013). It has also been suggested that the positive traits of narcissism tend to be short-lived (Badloe & Janssen, 2023). Soon after, negative traits such as exploitation, selfishness, and manipulation tend to emerge, leading to relationship breakdowns (Badloe & Janssen, 2023). These negative traits manifest in poor resource management, dysfunctional leadership, and personal mismanagement (Hogan & Ones, 2005). The impact of narcissism on access to finance has been only partially studied (Badloe & Janssen, 2023), with recent literature emerging since 2022 focusing on narcissism and crowdfunding (Badloe & Janssen, 2023). Results indicate that narcissistic entrepreneurs set lower funding and campaign targets over longer periods to protect their egos from being bruised by unmet targets (Butticè & Rovelli, 2020). The literature also suggests that recent studies have concentrated on a single financing source—crowdfunding (Liu et al., 2021); thus, there is an identified gap for further exploration. Therefore, it can be concluded that research on narcissism in entrepreneurial finance is limited, and the following proposition aims to address this gap.

Based on the above literature review, hypotheses were developed to examine the finance preferences of narcissist entrepreneurs, especially start-up enterprises that prefer to use internal sources of finance rather than debt and equity. Start-up entrepreneurs' preferences tend to be aligned with those embodying narcissist tendencies, who are more likely to maintain control over their entities by making internal financing choices, as opposed to taking on excessive debt. Secondly, to protect their fragile egos, narcissists may opt not to use external finance to reject external influence within their enterprises (Badloe & Janssen, 2023), which may have adverse consequences for economic growth and job creation. Despite this fact, narcissists are more likely to succeed at external resource acquisition because of their charisma (Sundermeier et al., 2020), persuasive traits and ability to use information for that purpose. On the contrary, because of their manipulative and unproductive characteristics, the relationship can be strained over time, leading to adverse outcomes. Thus, because of the narcissist's inflated ego, they may be more drawn to seek internal funding sources to maintain control over the entity (Badloe & Janssen, 2023) as they will not concede control and may not be subject to investors' monitoring and control. It is proposed that narcissistic entrepreneurs will be more drawn to internal funding decision choices to protect their fragile egos, as this funding source provides narcissists with control over their entities and makes them more likely to defend themselves (Bollaert et al., 2020). Hence the proposed Hypothesis:

Hypothesis 7 (H7): Null and Alternative

- **H₀₇:** Narcissism does not significantly influence the preference for internal versus external funding amongst UK entrepreneurs.
- **H₁₇:** Narcissism significantly influences the preference for internal versus external funding amongst UK entrepreneurs.

By examining personality traits, the productive traits of BFI, which are relatively positive traits of a narcissist, are identified as openness to experience and extraversion, which magnify social presence, intellect, confidence and assertiveness. These traits may moderate the relationship in seeking external funding. Narcissists leverage their social networks and power through social status to secure early stakeholder interest. Research has shown that narcissists succeed in initial resource acquisition and fundraising primarily because of their charisma and ability to communicate trust in times of uncertainty and opportunity (Badloe & Janssen, 2023). Furthermore, their extroverted behaviour may prompt them to make a good impression, thereby enhancing their fundraising success. Thus, the proposed hypothesis:

Hypothesis 8a (H8a): Null and Alternative

- **H_{08a}:** Amongst narcissistic UK entrepreneurs, openness to experience does not significantly influence preference for external funding.
- **H_{18a}:** Amongst narcissistic UK entrepreneurs, openness to experience significantly influences preference for external funding.

Hypothesis 8b (H8b): Null and Alternative

- **H_{08b}:** Amongst narcissistic UK entrepreneurs, extraversion does not significantly influence preference for external funding.
- **H_{18b}:** Amongst narcissistic UK entrepreneurs, extraversion significantly influences preference for external funding.

The research does not imply that those who are high in narcissism are more successful than those who are not; however, there are some traits of the narcissist that the literature has identified as productive in the short run and could be used as predictors of entrepreneurial success.

Hypothesis 9 (H9): Null and Alternative

- **H₀₉:** Narcissism, openness to experience, and extraversion do not significantly influence the likelihood of successfully obtaining external funding among UK entrepreneurs.
- **H₁₉:** Narcissism, openness to experience, and extraversion significantly influence the likelihood of successfully obtaining external funding among UK entrepreneurs.

There are other variables that can be controlled to examine the contribution to research. The need to examine and introduce socio-economic factors, such as age, gender, educational level, ethnicity, entrepreneurial experience, business Size (number of employees), and industry sector, in addition to personality, may play a key role in the acquisition of financial resources.

Hypothesis 10 (H10): Null and Alternative

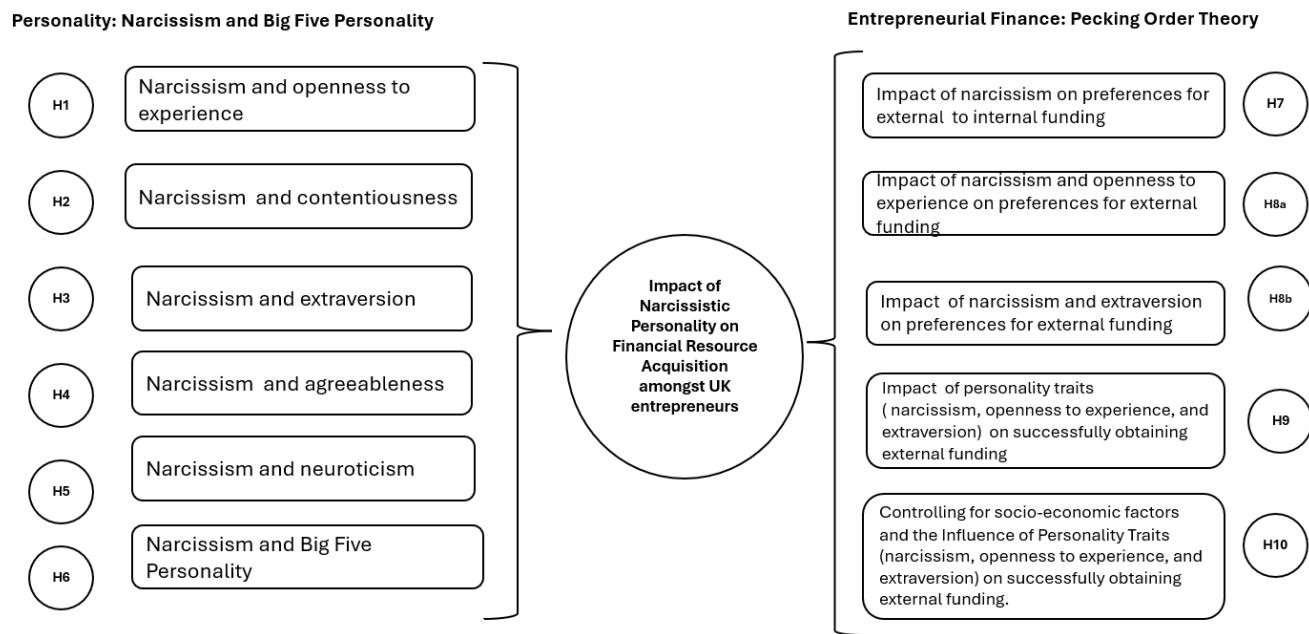
- **H₀₁₀:** Personality traits (narcissism, openness to experience, extraversion) have no significant effect on funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity, experience, business size and industry).
- **H₁₁₀:** Personality traits (narcissism, openness to experience, extraversion) significantly affect funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity, experience, business size and industry).

Research on narcissism, personality and entrepreneurship is still limited, and hence the research gap. This thesis raises several questions to examine the relationship between narcissistic tendencies and the success entrepreneurs have in acquiring resources. The thesis takes an initial step towards exploring this relationship. Are there some traits of the narcissist that the literature has identified as productive in the short run? Recent studies have highlighted an increase in the prevalence of narcissism, particularly among millennials and Generation Z (Y. Liu et al., 2019). This generation currently makes up over 75% of the workforce, with important implications for the work environment, including entrepreneurship (Y. Liu et al., 2019). Therefore, narcissism will become more widespread and given that SMEs account for 60%–70% of global employment and that this trait is popular among millennials and generation Z, it is likely to gain relevance in the changing workforce, including entrepreneurship (Rao et al., 2023). The prevalence of narcissism in current generations, such as Generation Z and millennials, is of growing significance in driving economic growth, and

it is essential to understand the role of narcissism in the entrepreneurial process (Badloe & Janssen, 2023).

This hypothesis analysis aims to provide more direction for research developing around narcissism and entrepreneurship. Narcissism has several influences on entrepreneurial choice, activities, and output. There is a need for further research that looks at resilience, narcissism, and entrepreneurial finance. Research has found that psychological resilience also weakens the positive correlation between narcissism, entrepreneurial intention, and entrepreneurial finance (Wu et al., 2019). Further research on the financing choices of narcissistic entrepreneurs can be of great value to the field of study by supporting academics, entrepreneurs, steam houses, and incubators to help entrepreneurs with the psychological dimension of starting a venture. Do narcissists prefer more internal funding than external funding (Badloe & Janssen, 2023.)? Centring research on entrepreneurs, entrepreneurial ventures, and the entrepreneurial environment may help researchers better understand entrepreneurship; there is a further need to examine the entrepreneur as the focal point of entrepreneurship (Lévesque & Stephan, 2020). For this reason, scholars need to examine further the need for research on the significant role of the entrepreneur psyche across various entrepreneurial activities and phenomena (Lévesque & Stephan, 2020). There is a need for further research to examine what external factors are influenced by personality and narcissism (Zajenkowski & Szymaniak, 2021). The field of entrepreneurship, including academia, incubators, and accelerators, could benefit further from more research on the entrepreneur's persona and the review of the theory of narcissism. Studies have found that narcissists' level of entrepreneurial intentions is higher. As such, narcissistic tendencies might be beneficial in the early stage of startup entrepreneurial activities and more detrimental in later stages. (Badloe & Janssen, 2023). The literature identifies the productive traits among the big five theories: "openness to experience" and "Extraversion". Productive traits such as intellect, connected to "openness to experience" and excitement, and social networking, which is "extraversion", are considered common traits of the narcissist. The thesis examines the need for further empirical research in academia, as summarised in figure 10 below.

Figure 10 Productive and Unproductive Entrepreneurial Behavioural Framework



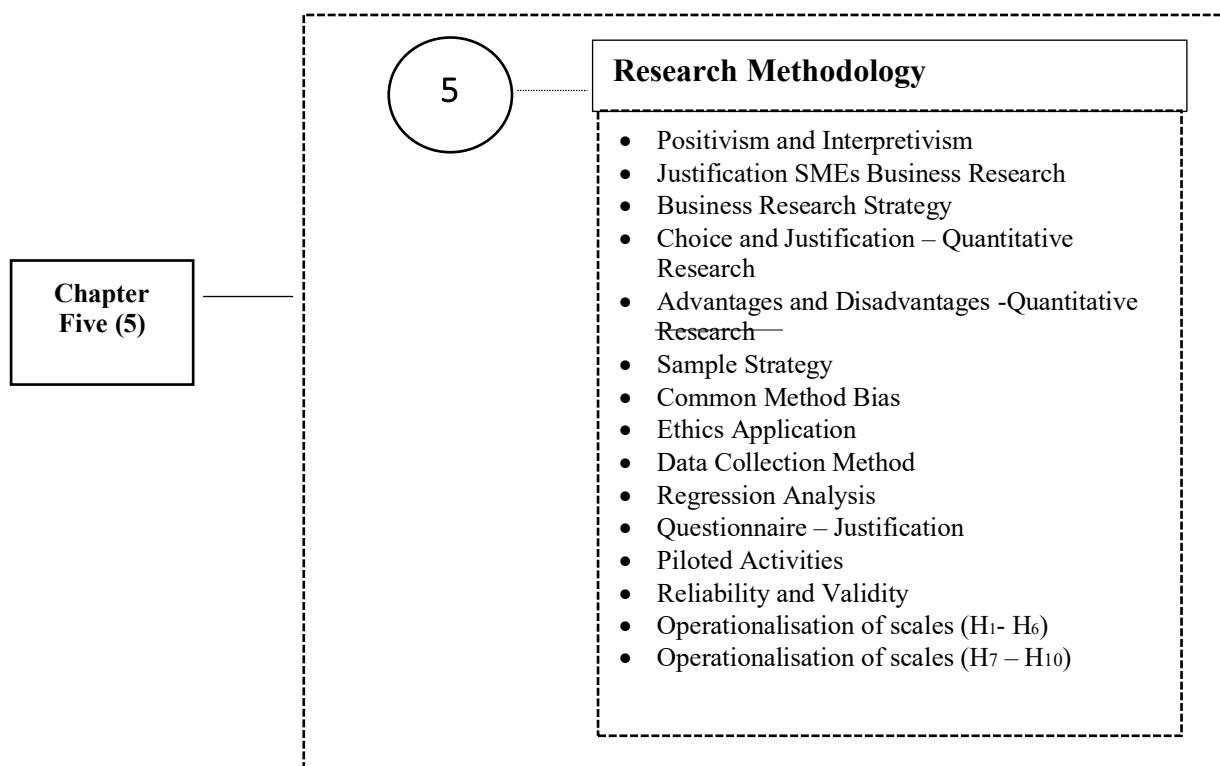
Research has concluded a correlation between narcissism and entrepreneurial activities, which occurs over a timeline. Entrepreneurial activities pertinent to the early stages of a founding company, such as becoming an active entrepreneur and producing the first product or service, and narcissistic tendencies, help the business get started and operate. There is, however, a diminishing return of narcissism in the long term, as their manipulative ways can become destructive within the work environment in managing trust and long-term relationships with investors, partners, employees, customers and clients (Badloe & Janssen, 2023). Therefore, it is later in the founding journey that narcissism becomes overwhelming and harmful to the company and its key stakeholders. The research demonstrates that the narcissist is more likely to choose an internal source of funding to protect their fragile ego and to maintain control over their entities. However, those high in extraversion and openness to experience may be more open to pursuing external funding sources, as they are more inclined to have social networks and enjoy the external process.

CHAPTER FIVE (5): RESEARCH METHODOLOGY

5.1 Introduction

This chapter explores the philosophical foundations of the research design, population, sample, and data collection. It also outlines the methods and research approach used in conducting the study. The chapter discusses data sources, collection, and operationalisation, and explains them throughout. The research methodology was guided by business research theories that support business, entrepreneurship, and management. Additionally, the chapter presents the philosophical underpinnings of the research, focusing on positivism and interpretivism, followed by a discussion of the key methodology adopted. It also covers the research focus, data collection methods, and operationalisation of the variables.

Figure 11: Structure of Chapter Five (5)



5.2 Positivism and Interpretivism

Methodology examines epistemology and ontology, critical concepts in research philosophy, or the philosophy of methods. Ontology originates from the Greek word 'Onotos', which is defined as being, and "logos" means study. Therefore, ontology is the study of being, and philosophical questions arise when the nature of reality is considered. Epistemology

concerns how to understand reality and the knowledge claims of any kind. The term “episteme” means knowledge, and “logos” means study. Epistemology answers the question of ‘How one can know reality’ (Byrne, 2018). Two central philosophical positions underpinning social science research are positivism and interpretivism.

A positivist social scientist uses methods resembling those of natural science. Positivism in social science is a quantitative approach that tests hypotheses (Byrne, 2018). Positivism is an epistemological position that advocates applying natural science methods to the study of social reality. Positivists describe the principle of phenomenism, whereby knowledge is validated by sense and can be genuinely warranted as knowledge (Bryman & Bell, 2015). The Positivist theory objectives are to generate a hypothesis that can be tested and allow an explanation of a law to be assessed, which is the principle of reductivism, on the one hand, where knowledge is arrived at by gathering facts that are provided as the basis of the law, which is the principle of inductivism. Science must and can be conducted in a value-free, objective way. There is a clear distinction between scientific and normative statements (Bryman & Bell, 2015b). Interpretivists, also called anti-positivists and social scientists, believe there is a significant difference between the natural and social sciences; the methods adopted in the natural sciences cannot be used in the social sciences.

Interpretivists generally use research methods such as ethnographic fieldwork or open-ended interviews. Interpretivism acts as an alternative to positivism. It argues that strategy requires recognising the distinction between people and the objects of the natural sciences, and that a social scientist must understand the meaning of social actions. In contrast, this research adopts a positivist approach, which claims that knowledge is purely factual, obtained through observation, measurement, and hypothesis testing, and that this knowledge is then analysed. The section discusses the philosophical stance that guides the approach to gaining knowledge about the world. The research methodology includes the strategy and design, offering the reasoning for choosing and applying specific methods, as well as detailing the procedures to attain the research aims.

5.3 Justification SMEs Business Research

This research adopts a positivist methodology, which holds that knowledge is solely factual, gained through observation, measurement, and hypothesis testing. Given the nature of the research and the variables, a positivist approach is most suitable for generating factual knowledge. The research objectives examine resource acquisition and personality, which are quantifiable variables that justify this approach. The section discusses the philosophical stance that underpins the approach to generating knowledge about the world. The methodological

design of SME financing research is reviewed through the top five journals on “Small Business Management,” focusing on the following: Empirical Research (80%), Modelling and Simulation (6%), Conceptual (10%), and Review (7%) (Rao et al., 2021). The table below summarises the methodological design used within SME financing research.

Table 2: Methodology Design of SME Financing Research

Methodological Design	Number of Research Papers	Percentage of Research Papers
Empirical	225	80%
Modelling and Simulation	18	6%
Conceptual	27	10%
Review	19	7%

Empirical research has previously used real-time data, while modelling and simulation studies have explored analytics and mathematical modelling. The third category is conceptual research, which focuses on studies that do not analyse real-time data. The fourth category is a review of research, comprising studies that evaluate prior research. It can be concluded that many studies are empirical, conceptual, review-based, or involve modelling. The data collection methods supporting the methodology design for SME financing research are presented in the table below.

Table 3: Data Collection Method SMEs Financing Research

Data Collection Method	Frequency of Research Papers	Percentage of Research Papers
Interviews	28	10%
Case Study	9	3%
Field Study	2	1%
Survey	85	30%
Archival Study	167	60%
Mixed Methods	16	6%

Most studies on SMEs' financing strategies use archival data (60%) as the primary data collection method, followed by Surveys (30%), interviews (10%), mixed methods (6%), case studies (3%), and fieldwork (1%). The data analysis techniques used are presented in the table below.

Table 4 : Data Collection Method in SMEs Financing Research

Data Analysis Technique	Frequency of Research Papers	Percentage of Research Papers
Descriptive Analysis	182	65%
Multiple Regression	70	25%
Correlation	46	16%
Panel Regression	46	16%

Qualitative Analysis	37	13%
Logistics Regression	16	6%
Probit Regression	26	9%
Mathematical Model	16	4%
Tobit Regression	10	4%
Factor Analysis	9	3%
Simulation or Sensitivity Analysis	7	3%
Time Series Analysis	5	2%
Cluster Analysis	4	1%
Poisson Regression	3	1%
Covariance Structural Equation Modelling	2	1%
Multiple Analysis of Variance	2	1%
Mann- Whitney Analysis	2	1%
Cox Models	2	1%
Binomial Regression	1	0.5%
Hierarchical Regression	1	0.5%
Partial Least Squares Structural Equational Modelling	1	0.5%
Discriminant Analysis	1	0.5%

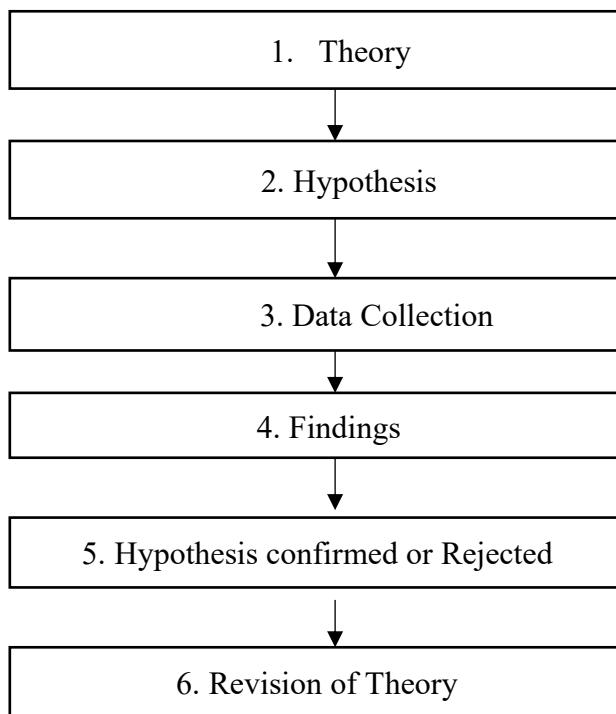
Based on previous research, over 22 unique data analysis techniques have been performed within SME financing strategies. Most studies used more than one technique to analyse the data. In the review, 502 incidents were observed using 22 data analysis techniques in 280 research papers on SME financing. (Rao et al., 2021). SME financing is noted as mainly influenced by descriptive technique (65%), followed by multiple (25%) and panel regression (16%). Qualitative analysis consists of thematic and content analysis of case studies and interviews (13%) (Rao et al., 2021). Given the nature of the research, past research justifies the relevance of surveys for measuring and quantifying data to support empirical evidence and outcomes.

5.4 Business Research Strategy

The research strategy aligned with positivist epistemology and research practice. Quantitative research involves collecting and analysing data, using a deductive approach to the relationship between theory and research, testing theories grounded in the positivist theory of natural science, and examining social reality as an external matter (Bryman & Bell, 2015b). On the contrary, qualitative research is a strategy that usually emphasises words rather than quantifying data in collection and analysis. This strategy predominantly emphasises an inductive approach to the relationship between theory and research and has also rejected the norms of the natural science mode. The research strategy primarily defines the general orientation of this study's business research approach, which will be quantitative. Quantitative research emphasises quantification in data collection and analysis. It uses a deductive

approach to examine the relationship between theory and research, focusing primarily on testing theories. Quantitative studies emphasise the use of a natural scientific model and positivism, and they view social reality as external and objective, adopting a deductive approach.

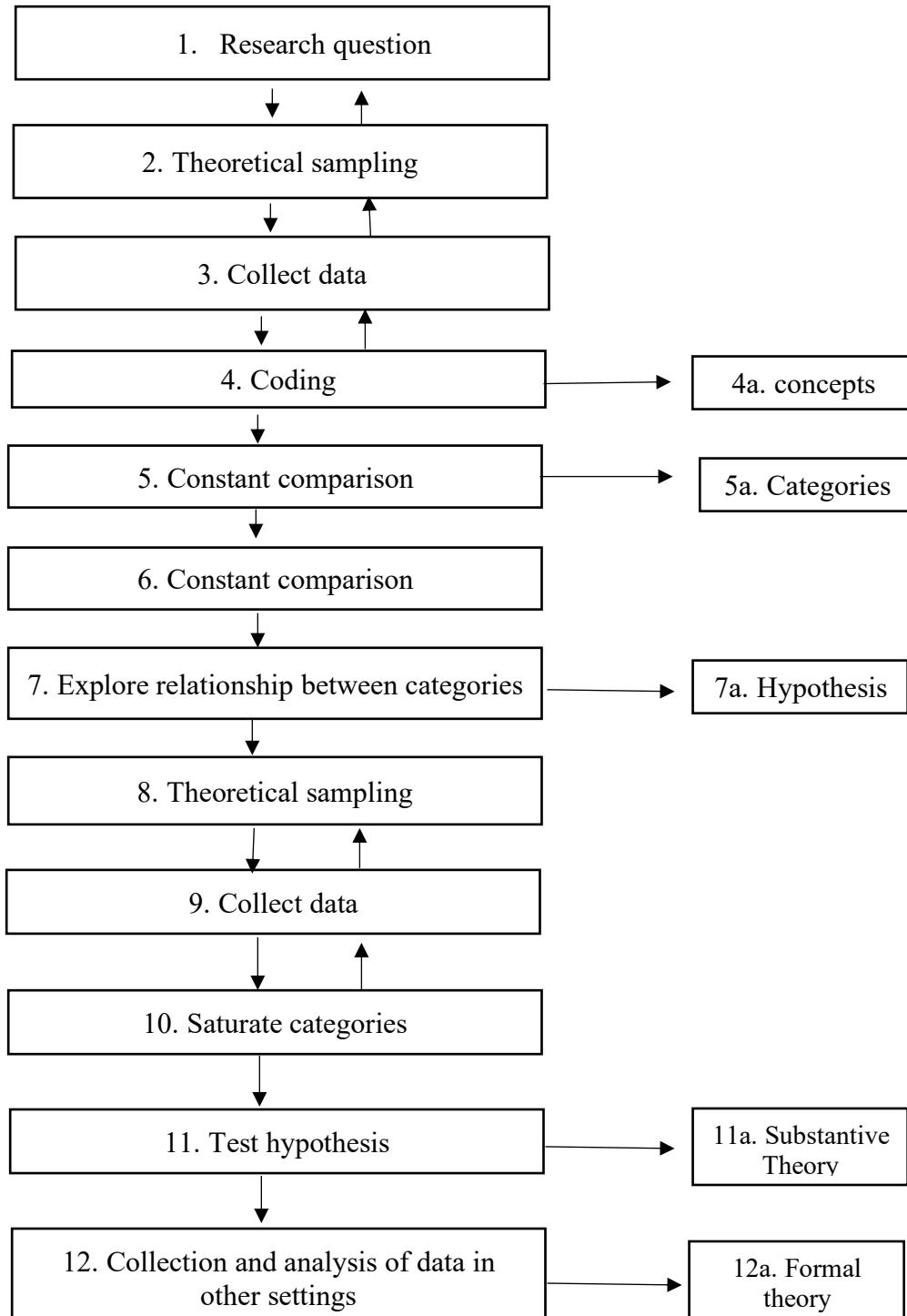
Figure 12 Summary of the Research Strategy Deduction



The research will take a deductive approach, as discussed above, in which the literature is reviewed, and hypotheses are developed and aligned with the positivist research strategy. It is particularly evident in grounded theory through the theoretical lens of personality and business organisation theory. The process includes developing research questions and conducting theoretical sampling by collecting data, including coding, constant comparison, identifying concepts and categories, exploring the relationship between categories to arrive at a hypothesis, and collecting and testing data and theory identification. The data sources were a combination of secondary and primary data. The secondary research included a critical review of the field literature and a review of journals, articles, and industry reports forming the theoretical framework. The primary research will consist of collecting data from entrepreneurs. This will then inform the research process from the research question outlined, and the theoretical lenses will inform the theoretical sampling processes, which will, in turn, inform the data collected. The research questions examine the big five personalities and

narcissism through a psychological lens and financial resource acquisition through the business organisation lens. Figure 13 graphically represents how the theoretical lens has informed the research process.

Figure 13 Research process and outcomes in grounded theory

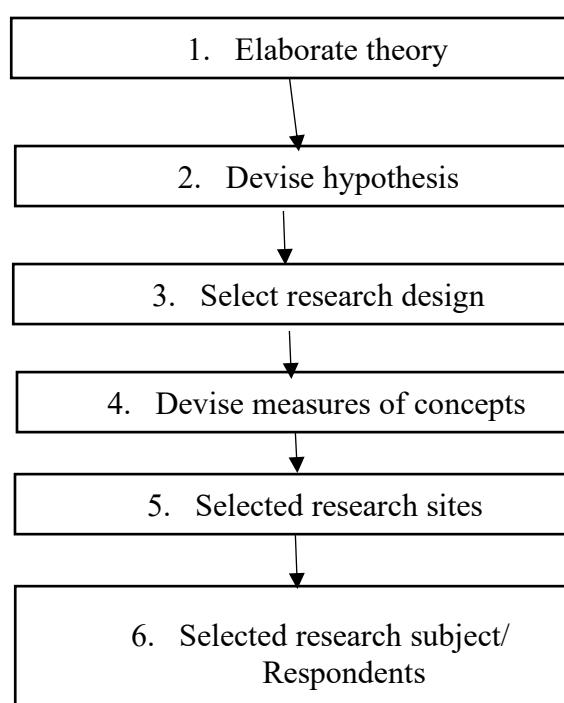


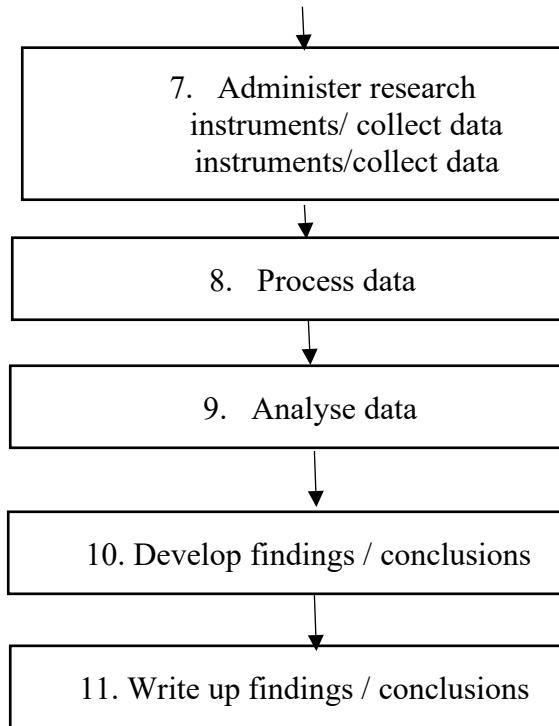
5.5 Choice and Justification – Quantitative Research

The justification for the research strategy was initially guided by the research objectives and questions, influenced by the research philosophy and theoretical perspective. The research philosophy is positivist and epistemological, aligned with the hypothetico-deductive model of science, which involves testing a priori hypotheses and conducting experiments by operationalising variables and measures. The outcomes of hypothesis testing are then used to inform theory and natural science. The research aligns with positivism as the basis for the chosen strategy. The aims, objectives, and questions centre on identifying explanatory associations or causal relationships through a quantitative approach. This approach typically involves empirically based findings from large sample sizes, which are preferred, leading to generalisable inferences, replicability of results, and controlled experimentation. These principles have long guided positivist science.

The research methodology employed is quantitative. The study adopts the principles and key features of a quantitative approach. It utilises quantitative methods to measure and quantify social phenomena and relationships. This concept is significant in quantitative research, including grounded theory and related measurement tools. Quantitative research examines the reliability and validity of the measurement process. Its connection with grounded theory justifies its application in this study; the focus is primarily on entrepreneurial behaviour, personality traits, and business organisation, covering measurement, causality, generalisation, and replication. The data will be coded and transformed into numerical values for analysis using the software SPSS.

Figure 14: Research strategy process of quantitative research





The quantitative research strategy was suitable for addressing the research questions, as it operationalised scales. The main aim of quantitative research is to generate knowledge and develop an understanding of the social world. It is utilised by social scientists, including communicating with researchers to observe phenomena or events impacting individuals and society. Quantitative research studies a specific group, known as a sample population, and learns from it.

5.6 Advantages and Disadvantages -Quantitative Research

Quantitative research is mainly designed to gather numerical data, often to examine a phenomenon within a specific group, such as UK entrepreneurs. Quantitative data can be measured, which is one of its advantages. The samples are usually large and considered representative of the population. The results from the sample offer a general and sufficiently comprehensive view of the entire population. Additionally, the quantitative research method is chosen because it emphasises objectivity and is suitable when it is possible to collect measurable variables and make inferences from the sample (Almeida et al., 2017). Quantitative research uses structured procedures and formal instruments for data collection. The data is collected in an objective and systematic manner. Finally, statistical tools like SPSS are often used to analyse numerical data. The use of quantitative methods adds rigour to the research outcomes, although there are limitations in applying statistical significance testing

techniques and in measuring the robustness of the analysis. The survey research technique is commonly employed in quantitative research and involves structured questions.

Table 5 Summary of advantages and disadvantages of the quantitative research method - survey

Advantages	Disadvantages
Low Development Time	Data reliability is highly dependent on the quality of responses and the survey's structure.
Cost-effective	Rigidity of the structure
Easy data collection and analysis using statistical methods	Do not capture emotions, behaviour and changes in emotions of respondents
Can reach high audiences	
Not affected by the subjectivity of the research	

5.7 Sample Strategy

This research examined the association between UK entrepreneurs and the acquisition of financial resources. The study adopted a positivist approach and a quantitative design. The hypothesis was developed and discussed based on the grounded theory processes outlined above. A quantitative questionnaire design method will then be used to collect the data. The following are details of the sample design for data collection. The data collection and sample were collected from SME owners and CEOs in the United Kingdom. The sample size was selected using the formula below, subject to scope and budget constraints.

$$\text{SAMPLE SIZE} = \frac{(\text{Z Score})^2 \times \text{Std Dev} \times (1 - \text{std. Dev})}{(\text{Confidence Interval})^2}$$

$$\text{SAMPLE SIZE} = \frac{(1.96)^2 \times 0.5 \times (1 - 0.5)}{(0.05)^2}$$

$$\text{SAMPLE SIZE} = 385$$

Where:

Sample Size = Estimated minimum sample size

Z Score = Anticipated confidence level (95%)

Std Dev = Anticipated proportion measured

SMEs spanned various industries; no specific industry was chosen for examination, as personality varies across sectors. The sample comprised 250 SME entrepreneurs participating in the study. Challenges included collecting extensive data and ensuring all surveys were completed accurately. The questionnaire was administered via QuestionPro through the Prolific platform across the UK, requiring significant review time before respondents were compensated. Another challenge involved eliminating duplicate participants, which was successfully managed through rigorous reliability checks. The response rate was 94.76%, with 267 respondents initially, but only 250 completed the survey. The study focused on SMEs with 0-50 employees, including micro and small enterprises as defined. Micro Enterprises had 0-9 employees, while Small Enterprises ranged from 10-50. A structured questionnaire was developed to gather data and produce theoretical outcomes. It was created on QuestionPro and distributed via Prolific. Data collection was primarily quantitative, targeting SME owners and CEOs across various UK industries. Additionally, secondary data were extensively reviewed, including grounded theory on external factors affecting SMEs' access to capital, as well as journal articles and practice reviews on personality traits.

5.8 Common Method Bias

Common method bias is a significant and common issue in survey research. It occurs when both independent and dependent variables are included within the same survey, which can lead to a high chance of consistent answers. This can be problematic if the questions are similar or closely related in content. The questions were administered online via a questionnaire that included both dependent and independent items. However, respondents were not informed about the purpose of the questions. To minimise the potential for common bias in the survey, the NPI 40-related questions included two statements, and the scales were reversed. To further reduce common bias, some questions used different formats; a Likert scale was employed for the BFI, and some questions utilised alternative response formats. The length of the survey can also introduce bias if respondents become tired or bored. There were no biases common within the data.

5.9 Ethics Application

The ethics application was completed and prepared for submission in accordance with Birmingham City University standards. Data was collected from founders and CEOs of small and medium-sized enterprises. Anonymity and confidentiality were maintained through an agreement presented at the start of the questionnaire, with no reference to personal names or information; electronic data will be encrypted, and BCU will generate a password. The researcher had undergone training at BCU in conducting research and completed a postgraduate research project there. Refer to Appendix A for the ethics approval letter.

5.10 Data Collection Method

A structured questionnaire (survey) was designed and administered to gather data on the Big Five personality traits, narcissism, and financial resource acquisition from SME owners, founders, and CEOs. Questions were developed based on the scales outlined in the section below. QuestionPro was used to administer the questionnaires. Data collection occurred among SME owners and CEOs in the United Kingdom. SMEs spanned various industries, and no specific industry was selected for examination, as personality traits and external funding are relevant across all sectors. The sample included 250 SME entrepreneurs participating in the research. The study focused on SMEs with 0-50 employees, aligning with the definitions of micro and small enterprises. The sampled SMEs were categorised as micro-enterprises (0-9 employees) and small enterprises (10-50 employees). Sub-groups within the sample were identified for data collection during this research. The quantitative approach measured independent variables, including the Big Five personality traits, narcissism, and sources of finance.

5.11 Regression Analysis

The research approach of this study was quantitative, including linear regression, multiple linear regression, and binary logistic regression. Data sources comprised both secondary and primary data. Primary data were gathered from entrepreneurs in the United Kingdom. The questionnaire collected information on demographics, the five personality traits, narcissism, and external funding, targeting SME entrepreneurs, CEOs, and owners. Secondary research involved a critical review of relevant literature, drawing on journals, articles, and industry reports through a grounded theory perspective. The collected data were analysed and tested using SPSS and a model-building approach (Anderson et al., 1988). Funding decisions depend on the entrepreneur and are therefore influenced by their personality. It is important to emphasise that the study's focus was narcissism; thus, in the

regression analysis, narcissism is the dependent variable, while the Big Five personality traits are considered to relate to the entrepreneur. However, the primary aim of the study remains to examine narcissism, the Big Five personality traits, and preferences for funding and the likelihood of successfully obtaining external funding.

Table 6 A summary of the linear regression and multiple linear regression relationship for hypothesis one (1) (H_1) and hypothesis six (6) (H_6)

Hypothesis	<p>Hypothesis 1 (H1): Null and Alternative</p> <ul style="list-style-type: none"> — H_{01}: There is no significant association between narcissism and openness to experience amongst UK entrepreneurs. — H_{11}: There is a significant association between narcissism and openness to experience amongst UK entrepreneurs. <p>Hypothesis 2 (H2): Null and Alternative</p> <ul style="list-style-type: none"> — H_{02}: There is no significant association between narcissism and conscientiousness amongst UK entrepreneurs. — H_{12}: There is a significant association between narcissism and conscientiousness amongst UK entrepreneurs. <p>Hypothesis 3 (H3): Null and Alternative</p> <ul style="list-style-type: none"> — H_{03}: There is no significant association between narcissism and extraversion amongst UK entrepreneurs. — H_{13}: There is a significant association between narcissism and extraversion amongst UK entrepreneurs. <p>Hypothesis 4 (H4): Null and Alternative</p> <ul style="list-style-type: none"> — H_{04}: There is no significant association between narcissism and agreeableness amongst UK entrepreneurs. — H_{14}: There is a significant association between narcissism and agreeableness amongst UK entrepreneurs. <p>Hypothesis 5 (H5): Null and Alternative</p> <ul style="list-style-type: none"> — H_{05}: There is no significant association between narcissism and neuroticism amongst UK entrepreneurs. — H_{15}: There is a significant association between narcissism and neuroticism amongst UK entrepreneurs. <p>Hypothesis 6 (H6): Null and Alternative</p> <ul style="list-style-type: none"> — H_{06}: There is no significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs.
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	— H₁₆: There is a significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs.
Dependent Variable Narcissism Personality	The dependent <i>Variable (Y)</i> is the narcissistic personality of the entrepreneur.
Independent Variable Big Five Personality	The Independent <i>Variable (X)</i> is the entrepreneur's personality under the Five Theories. H ₁ ; Openness to Experience H ₂ ; Conscientiousness H ₃ ; Extraversion H ₄ ; Agreeableness H ₅ ; Neuroticism H ₆ ; Big Five Components

The dependent variable in the regression analysis is narcissistic personality disorder (NPD), used as a measure of narcissism. NPD describes persistent and extreme self-love, self-inflation, the pursuit of admiration, a lack of empathy, the pursuit of perfection, ignorance, and a sense of entitlement within personality and social theories. Narcissism was conceptualised as a personality trait that shares similar characteristics with NPD and exists along a continuum from low to high (Liu et al., 2021). It was measured using previous studies that predominantly used self-report scales, such as the NPI-40 (Raskin & Terry, 1988). The most used measure is the NPI, which employs self-report scales. These scales assess narcissism levels through responses to the 40 items of the NPI-40. This scale evaluates entrepreneurs' narcissism across seven components: authority, superiority, sufficiency, entitlement, exploitative tendencies, exhibitionism, and vanity. The scale employed to measure narcissism and entrepreneurship in this study was the NPI-40, a proven and reliable instrument. The independent variable in the regression analysis was the Big Five personality trait measure. The measurement utilised a Likert scale and was based on the short version of the Big Five model, as administered through questionnaires (Mayfield et al., 2008). These questions evaluate the five personality dimensions: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism.

Table 7: Summary of binary logistics regression relationship for hypothesis seven (7) (H7) and Hypothesis eight (8) (H8)

<p>Hypothesis</p>	<p>Hypothesis 7 (H7): Null and Alternative</p> <ul style="list-style-type: none"> — H₀₇: Narcissism does not significantly influence the preference for internal versus external funding amongst UK entrepreneurs. — H₁₇: Narcissism significantly influences the preference for internal versus external funding amongst UK entrepreneurs. <p>Hypothesis 8a (H8a): Null and Alternative</p> <ul style="list-style-type: none"> — H_{08a}: Amongst narcissistic UK entrepreneurs, openness to experience does not significantly influence preference for external funding. — H_{18a}: Amongst narcissistic UK entrepreneurs, openness to experience significantly influences preference for external funding. <p>Hypothesis 8b (H8b): Null and Alternative</p> <ul style="list-style-type: none"> — H_{08b}: Amongst narcissistic UK entrepreneurs, extraversion does not significantly influence preference for external funding. — H_{18b}: Amongst narcissistic UK entrepreneurs, extraversion significantly influences preference for external funding.
<p>Dependent Variable UK entrepreneurs' Preference for internal or external funding</p>	<p>The dependent <i>Variable (Y)</i> is the UK entrepreneur's preference for source of funding, internal and external, binary logistics group responses in 0 and 1, which is Dichotomous</p>
<p>Independent Variable Narcissism, openness to experience, extraversion</p>	<p>The Independent <i>Variable (X)</i> is the entrepreneur's personality</p> <p>H₇; Narcissism</p> <p>H_{8a}; Narcissism, Openness to Experience</p> <p>H_{8b}; Narcissism, Extraversion</p>

The dependent variable is UK entrepreneurs' preference for internal and external funding. Entrepreneurs were asked which type of funding they preferred. The independent variables

include entrepreneurs' personalities, such as narcissism, openness to experience, and extraversion.

Table 8: Summary of binary logistics relationship for Hypothesis Nine (9) and Hypothesis Ten (10)

<p>Hypothesis</p>	<p>Hypothesis 9 (H9): Null and Alternative</p> <ul style="list-style-type: none"> — H₀₉: Narcissism, openness to experience, and extraversion do not significantly influence the likelihood of successfully obtaining external funding among UK entrepreneurs. — H₁₉: Narcissism, openness to experience, and extraversion significantly influence the likelihood of successfully obtaining external funding among UK entrepreneurs. <p>Hypothesis 10 (H10): Null and Alternative</p> <ul style="list-style-type: none"> — H₀₁₀: Personality traits (narcissism, openness to experience, extraversion) have no significant effect on funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity, business experience, business size and industry). — H₁₁₀: Personality traits (narcissism, openness to experience, extraversion) significantly affect funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity, business experience, business size and industry).
<p>Dependent Variable Success in obtaining funding</p>	<p>The dependent variable (Y) is UK entrepreneurs' success in obtaining funding on the first attempt. UK entrepreneurs were asked whether they successfully obtained external funding at the first attempt, and responses were dichotomised (0/1) for binary logistic regression.</p> <p>X: are the independent variables: Narcissism, Openness to experience and Extraversion</p>
<p>Independent Variable Big Five Personality</p>	<p>The Independent variables (X) are Narcissism, Openness to experience and Extraversion. Age, gender, education, ethnicity, business experience, business size and industry</p>

The dependent variable is success in acquiring funding at the first attempt. Entrepreneurs who received external funding were asked whether they were successful at first: 'Yes' or 'No'. *The independent variables* are narcissism, openness to experience, and extraversion.

5.12 Questionnaire - Justification of Adopted Scales

This section will discuss the origin of the scales used in the questionnaire, supported by the literature. The three scales used to collect data were adopted from previous studies. Table 9 presents the scales used in the questionnaire.

Table 9: A Summary of Sources of Adopted Scales Used in the Questionnaire

Regression	Variables	Scales
Dependent Variable (Y): H8a, H8b, H9, H10	Financial Resource Acquisition	Source: Stuart & Fraser, 2004, <i>UK Survey of SME Finances, A Survey Instrument, Centre for Small and Medium-Sized Enterprises, Warwick Business School</i>
Dependent (Y): H1, H2, H3, H4, H5, H6 Independent Variable (X): H7, H8, H9, H10	Narcissism	Source: Raskin, R., & Terry, H. (1988). A Principal-Components Analysis of the Narcissistic Personality Inventory and Further Evidence of Its Construct Validity. In <i>Journal of Personality and Social Psychology</i> (Vol. 54, Issue 5)
Independent Variable (X): H1, H2, H3, H4, H5, H6, H7, H8a, H8b, H	Big Five Personality	Source: John, O., & Srivastava, S. (1991). Chapter 4. The Big Five Trait Taxonomy: History, Measurement, and Theoretical Perspectives (Second Edition). <i>The Big Five Inventory</i> .

The personality scale used was the Big Five Personality Scale by John and Srivastava (1991). This scale provides a comprehensive overview of the Big Five Trait Taxonomy, including its historical development and theoretical foundation. The Big Five Inventory (BFI) is a well-established and widely recognised benchmark in personality psychology, offering both conceptual clarity and empirical support for assessing personality traits. Using this scale justifies the research's reliance on a validated, theoretically sound personality model, allowing for reliable measurement and comparison with existing studies. Furthermore, the BFI is the most recognised model for personality and serves as a core framework in business contexts. Several short forms of the Big Five personality assessment are available, and research may need to select a highly brief version of the Big Five dimensions to obtain a concise measure for analysis. The literature supports the extended version of the Big Five Inventory (BFI), which demonstrates superior psychometric properties compared to shorter instruments (Gosling et al., 2003).

Most research has shifted from long to short forms for various reasons, including high administrative costs, although there are some benefits to using short instruments (Gosling et

al., 2003). The Big Five framework indicates that most individual differences are captured. The 44-item Big Five inventory used in the studies is one of the well-established questionnaires, alongside the NEO Five-Factor Inventory (Costa & McCrae, 1992) and Goldberg's instrument, which comprises 100 trait-descriptive adjectives (Goldberg, 1992). The Big Five personality traits include both direct and reverse elements. The five traits are openness to experience, characterised as imaginative (that is, curious, reflective, creative, deep, open-minded, not conventional); conscientiousness, as dependable, organised, hardworking, responsible, self-disciplined, thorough; extraversion, as enthusiastic (that is, sociable, assertive, talkative, active, not reserved or shy); agreeableness, as kind (that is, trusting, generous, sympathetic, cooperative, not aggressive or cold); and neuroticism, as not calm (that is, anxious, moody, not self-confident, easily upset, and easily stressed). Each of the five traits was rated on a 7-point scale, ranging from 1 (disagree strongly) to 7 (agree strongly) (Gosling et al., 2003). Numerous studies have used the 44-item Big Five inventory (John & Srivastava, 1991). This research has demonstrated high convergent validity with other self-report scales and peer ratings (Gosling et al., 2003).

The second adopted scale in the research was the Narcissistic Personality Inventory (Raskin & Terry, 1988). This paragraph explains the rationale for adapting the NPI40 questionnaire: A Principal-Components Analysis of the **Narcissistic Personality Inventory (NPI)** and Further Evidence of Its Construct Validity. This discussion will examine the use of the NPI-40. Much research on narcissism relies on the 40 Item Narcissistic Personality Inventory (Raskin & Terry, 1988). To reflect different aspects of narcissism and capture the measurement of NPI40. The justification of using the NPI40 in comparison to other short forms of narcissism, and examines unique constructs such as authority, exhibitionism, superiority, entitlement, vanity, and self-sufficiency (Ames et al., 2006).

The NPI-40 was chosen over the NPI-16 because it more accurately captures grandiose narcissism and aligns with the conceptualisation of narcissism as a multifaceted personality trait suitable for measuring grandiose narcissism in the general population, rather than as a clinically derived measure (Ames et al., 2006). The NPI-40 was used because it conceptualises narcissism as a typical personality trait rather than a clinical disorder and aligns with numerous foundational studies focused on subclinical personality features in non-clinical settings. Based on the research objectives and questions, the NPI-40 was well-equipped to address these aims. Therefore, the NPI-40 has well-established reliability and validity and is widely employed in psychological and organisational research. From a psychometric perspective, the NPI-40 has demonstrated strong internal consistency throughout the

literature, with Cronbach's alpha (α) generally ranging from 0.80 to 0.90. It has been tested for reliability and construct validity across diverse populations (Corry et al., 2008). In summary, the NPI-40 was selected as the measure of narcissism because it aligns well with measuring subclinical narcissism, focusing on personality traits rather than clinical diagnoses. The NPI-40 scale is recognised for producing reliable and valid data, making it appropriate for quantitative research, statistical analysis, and inferential interpretation.

Another key scale used in the data collection process to gather responses from entrepreneurs regarding financial resource acquisition was adopted from the study by Stuart & Fraser (2004), the UK Survey of SME Finances (UKSMEF), and the survey instrument developed by the Centre for Small and Medium-Sized Enterprises at Warwick Business School. The survey was conducted in the UK and was found to represent a national survey of SME finance research, having been developed by Warwick Business School. One of the main reasons for adopting the finance scale from their work is that the 2024 instruments were administered to a large, systematically sampled UK SME population and were fielded with professional survey agencies. They were thoroughly vetted for clarity, coverage, and robustness, supporting external validity. Using UKSMEF has been adopted by many subsequent academic and policy studies, which use a similar scale within their research to enable comparisons with earlier findings and trend analyses. The research also examines internal consistency and construct validity within the sample. As explained in this section, there is clear justification for the use of the three scales within the research based on their reliability, validity, and acceptance as well-known instruments within their respective fields. The next sections will review piloted activities and the testing of reliability and validity of the scales discussed above and used within the questionnaire.

5.13 Piloted Activities

A pilot study was conducted to test the research instrument (questionnaire) and assess respondents' understanding of the question structure. The pilot sample was 16% of the study sample size, aligning with the literature recommendation (Connelly, 2002) that a 10% sample size suffices for a pilot test. Therefore, for the pilot activities, the questionnaire was administered online via Prolific to gather responses from forty (40) entrepreneurs and business founders. This was done to determine whether the questionnaire needed modification. Although the questions collected data on key variables in the research—namely, narcissism, Big Five Personality, and Finance—and the scales used were standard, it was

essential to conduct a pilot to examine respondents' reactions thoroughly. The pilot aimed to clarify whether amendments to the questionnaire were necessary and to confirm its reliability. It was crucial to evaluate respondents' reactions, ensure clarity in each construct's items, and verify the questionnaire's accuracy, relevance, reliability, and validity.

During the pilot phase of the research, several key preparatory activities were undertaken to ensure rigorous measurement procedures and smooth field data collection. First, the dispositional traits of SME owner-managers were assessed using established psychometric inventories: the Big Five Inventory (BFI), which measures extraversion, agreeableness, conscientiousness, neuroticism, and openness through 44 self-report items adapted for the field. Second, narcissistic tendencies were evaluated using the Narcissistic Personality Inventory (NPI-40), a 40-item paired-statement scale addressing facets such as authority, self-sufficiency, superiority, exhibitionism, exploitativeness, vanity, and entitlement. These tools were incorporated into an online questionnaire distributed to a small, convenience sample of UK SME owner-managers. The aim was to test item comprehension, scale reliability, and internal consistency. Feedback from pilot respondents highlighted some ambiguities in phrasing—particularly regarding financial terms—leading to minor wording adjustments (for example, clarifying 'external finance' as bank loans, trade credit, or equity). This also facilitated the assessment of Cronbach's α and factor loadings for both the BFI subscales and NPI items prior to full-scale deployment. Beyond psychometric evaluation, the pilot phase included developing a version of the UK SME finance environment, creating a realistic context and questions on external financing behaviour. Through this preparatory work, the study enhances its construct validity, measurement reliability, and operational feasibility before the main study.

5.14 Reliability and Validity

Reliability is the consistency of a measure of a concept. The following factors will be considered in the research to assess reliability. Stability entails asking whether a measure remains stable over time. This will foster confidence in the research results for the sample of respondents. This indicates that if the same sample is administered, the variations in results will be minimal (Bryman & Bell, 2015b). Internal reliability evaluates the scale and whether its indicators are consistent and make up the scale or index. This will evaluate whether the respondent's scores are appropriately measured. Reliability assesses subjective judgment and is based on how data are categorised in the results. On the other hand, validity refers to whether an indicator devised to evaluate a concept measures the concept. Validity looks at the

integrity of the conclusions. The following factors are crucial for validity. Credibility looks at how believable the findings are. Transferability looks at whether the findings apply to another context. Dependability looks at whether the findings can be used at other times. Confirmability is the extent to which the researchers' values intrude on the conclusions (Bryman & Bell, 2015b). The sales were previously adopted by NPD, narcissistic personality, Big Five personality, and financial resources. Further analysis will be done examining the Cronbach alpha of the piloted activities to inform the reliability and validity of the questionnaire, and to determine whether there will be any further amendments. The tables below represent the previously adopted scales that will be included in the survey instruments and regression analysis.

Table 10 Summary of Scales adopted in the regression analysis H1 - H6

Regression	Variables	Scales
Dependent Variable (Y)	Narcissism	SOURCE: Raskin, R., & Terry, H. (1988). A Principal-Components Analysis of the Narcissistic Personality Inventory and Further Evidence of Its Construct Validity. In <i>Journal of Personality and Social Psychology</i> (Vol. 54, Issue 5)
Independent Variable (X)	Big Five Personality	Source: John, O., & Srivastava, S. (1991). Chapter 4. <i>The Big Five Trait Taxonomy: History, Measurement, and Theoretical Perspectives</i> (Second Edition). The Big Five Inventory

Table 11 Summary of Scales adopted in the regression analysis H7-H10

Regression	Variables	Scales
Dependent Variable	Financial Resource Acquisition	Source: Stuart & Fraser, 2004, <i>UK Survey of SME Finances, A Survey Instrument, Centre for Small and Medium-Sized Enterprises, Warwick Business School</i>
Independent Variable (Y)	Narcissism	Source: Raskin, R., & Terry, H. (1988). A Principal-Components Analysis of the Narcissistic Personality Inventory and Further Evidence of Its Construct Validity. In <i>Journal of Personality and Social Psychology</i> (Vol. 54, Issue 5)
Independent Variable (X)	Big Five Personality	Source: John, O., & Srivastava, S. (1991). Chapter 4. <i>The Big Five Trait Taxonomy: History, Measurement, and Theoretical Perspectives</i> (Second Edition). The Big Five Inventory

Cronbach's Alpha will be used to evaluate the questionnaire's reliability and validity. Reliability and validity are two essential elements in developing measurement tools. Validity relates to the degree to which an instrument measures what it is meant to measure. Reliability pertains to an instrument's capacity to produce consistent results. It is well established that the reliability of a questionnaire is closely linked to its validity; an instrument cannot be considered valid unless it is reliable. However, an instrument's reliability does not depend on its validity. The Cronbach's alpha, developed by Lee Cronbach in 1951, provides a measure of a test or scale's internal consistency. It is represented as a number indicating the extent to which all items in a test assess the same construct. The table below summarises the reliability of the adopted scales and the statistical outcomes included in Appendix E – Reliability and Validity Statistical Outcome.

Table 12: Cronbach's Alpha Results of Big Five Inventory (BFI) Piloted Activities

Reliability Statistics	
Cronbach's Alpha	N of Items
0.752	5

SOURCE: SPSS Results: Table 1 Appendix E

From the piloted activities of 40 samples, the Big Five Inventory (BFI) demonstrates acceptable internal consistency, with a Cronbach's alpha of 0.752 for the Big Five personality dimensions combined. According to reliability benchmarks, alpha values above 0.70 are generally considered acceptable for research purposes. This indicates that the five traits—Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism—show a satisfactory level of interrelatedness while still representing distinct constructs. The item-level statistics display moderate variability across the traits, with means ranging from 25.93 (Neuroticism) to 39.10 (Openness), suggesting a diverse distribution of personality characteristics in the sample. The overall scale variance (155.33) and standard deviation (12.46) further suggest an adequate spread in total scores. Taken together, these results support the reliability of the Big Five Inventory for assessing personality within this population, aligning with previous findings that the BFI generally demonstrates good internal consistency across diverse groups (John et al., 1991).

Table 13 Cronbach's Alpha Results of Narcissistic Personality Inventory (NPI) Piloted activities

Reliability Statistics	
Cronbach's Alpha	N of Items
0.851	40

SOURCE: SPSS Results: Table 2 Appendix E

The Narcissistic Personality Inventory (NPI) demonstrated high internal consistency in this sample of 40 participants, with a Cronbach's alpha of 0.851 across its 40 items. Values above 0.80 are typically interpreted as indicating good reliability. This suggests that the NPI items work cohesively in measuring narcissistic traits such as authority, exhibitionism, superiority, entitlement, exploitativeness, self-sufficiency, and vanity. The item means ranged from 1.20 to 1.90, reflecting variability in how strongly participants endorsed different aspects of narcissism, while the generally moderate standard deviations (approximately 0.30–0.51) indicate relatively consistent responses across individuals. The scale-level variance (53.60) and standard deviation (7.32) show an adequate spread of total narcissism scores within the sample. Overall, the results agree with previous research indicating that the NPI reliably captures multidimensional facets of narcissism and maintains strong psychometric properties across diverse populations (Raskin et al., 1988).

Table 14 Cronbach's Alpha Results of Financial Resource Acquisition Piloted Activities

Reliability Statistics	
Cronbach's Alpha	N of Items
0.1	4

The UKSMEF scale showed very low internal consistency, with a Cronbach's alpha of 0.10 across its four items. This value is well below the generally accepted threshold of 0.70 for adequate reliability. Despite the low Cronbach's alpha, the questions used to assess UKSMEF results can still be meaningfully employed, especially because scales with diverse item content are not always expected to demonstrate high internal consistency. Reliability coefficients can be artificially reduced when items measure different but related aspects of a

broader construct (DeVellis et al., 2017). In this context, the UKSMEF items capture various aspects of external funding experiences—such as success, difficulty, preference, and amount received—which may naturally function as separate indicators rather than highly correlated measures. Nunnally and Bernstein (1994) also emphasise that early-stage or exploratory research can legitimately use measures with lower reliability, particularly when aiming for descriptive insights or hypothesis generation rather than precise prediction. Therefore, the UKSMEF results remain valuable for understanding patterns in participants' funding experiences, guiding future revisions of the measure, and informing subsequent research directions. Additionally, this scale has been adopted within the UK entrepreneurial field. The questionnaire was amended for wording and to clarify questions; however, based on the reliability and validity analyses, Cronbach's alpha from the piloted activities did not warrant further amendments, and it was therefore administered for the research fieldwork.

5.15 Justification of Independent and Dependent Variables

This section will discuss the justification of the variable used within the research context, assessing and noting limitations noted in the literature. The section will also discuss a gap in the literature, the variables adopted, and how using these variables contributes to knowledge by addressing the research questions. Firstly, the variables will be discussed in alignment with the primary reason for the two addresses and align with the research questions and research aim. *Research Question one (1) (RQ₁) examines the relationship between narcissism and the Big Five personality components (Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism) among entrepreneurs in the United Kingdom?* The variables will now be discussed. The variables in the relations addressing the research question are the Dependent Variable (Y), narcissism, and the Independent Variable (X), the Big Five Personalities (openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism). These were assessed in *Hypothesis One (H1) to Hypothesis Six (H6)*. The research examines these variables, as personality and narcissism are the two personality factors that are being examined through these studies. Then it evaluates whether there is an association between financial resource acquisitions. While other factors in the relationship are considered, the research narrows its scope to focus primarily on Big Five Personality and Narcissism because of a research gap: limited research on Narcissism and the key factors of Grandiosity and its association with the Big Five Theory, with extraversion and openness as the key experiences. The scales adopted

are the NPI-40 Narcissism and the Big Five Personality. These variables represent the key demonstration of the research question.

Table 15 Summary of Dependent (Y) and Independent (X) Variables - Hypothesis One (H1) to Hypothesis Six (H6)

Variables	Theory – Research Question One (1)	Adopted Scale
Dependent Variable (Y)	Narcissism	NPI 40
Independent Variables (X)	Openness to Experience Conscientiousness Extraversion Agreeableness Neuroticism	BFI 44

The selection of variables in the research was guided by the research questions being addressed, the literature in the field, and the research Gap. The research further expanded to include other variables examining financial resource acquisition, but the association between preferences for funding amongst UK entrepreneurs was found to depend on a personality factor. To contribute to knowledge, the research explores ***Research Question Two (2) (RQ2): How is personality (narcissism, openness to experience, and extraversion) associated with UK entrepreneurs' preference for internal versus external sources of funding?*** This research positions narcissism as the independent variable (X), representing the entrepreneur's level of narcissistic traits, which the literature suggests may shape decision-making tendencies and risk perceptions. The research also looks at the scope of examining personality traits of openness to experience, and extraversion and whether this influences a greater preference for external funding. The independent variables (X) are openness to experience and extraversion from the Big Five Personality (BFI). From the literature, there is a deep connection with openness to experience, extraversion and narcissism. The dependent variable (Y) is the preference for internal versus external funding sources. Entrepreneurs' relative inclination to rely on personal or retained resources rather than seek finance from external providers is operationalised. These variables were assessed in Hypothesis Seven (H7) and Hypothesis Eight (H8).

Table 16 Summary of Dependent (Y) and Independent (X) Variables - Hypothesis Seven (H7) to Hypothesis Eight (H8)

Variables	Theory- Research Question TWO (2) & Research Question	Adopted Scale
Dependent Variable (Y)	UK entrepreneurs' preference for the source of funding, Internal or external	UK Small Medium Size Enterprise Finance (UKSMEF)
Independent Variables (X)	Openness to Experience Extraversion Narcissism	BFI 44 NPI40

The research then examines personality traits and influences on successfully obtaining external funding on the first attempt, focusing on narcissism, openness to experience, and extraversion, and on influences on UK entrepreneurs. The research also examines socio-economic factors such as age, gender, education, experience, business size, and industry. To further expand the scope of the research, the study examines how personality traits, such as narcissism, openness to experiences, and extraversion, interact with embedded control variables, including age, gender, education, experience, business size, and industry. **Research Question Three (3) (RQ3):** *Do personality traits (Narcissism, Openness to Experience, Extraversion), including socio-economic factors, influence the success of obtaining external funding on the first attempt?* Provided the direction of the formation of the variables. Therefore, the primary justification for using the variables was guided by the research gap and the research question's focus. The table below summarises the variables

Table 17 Summary of Dependent (Y) and Independent (X) Variables - Hypothesis Nine (H9) to Hypothesis Ten (H10)

Variables	Theory – Research Question TWO (2)	Adopted Scale
Dependent Variable (Y)	UK entrepreneurs' preference for the source of funding, Internal or external	UK Small Medium Size Enterprise Finance (UKSMEF)
Independent Variables (X)	Big Five Personality Narcissism Socio-economic Factors	BFI 44 NPI40

	Age, Gender, Education, Experience, Business Size, and Industry)	
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The literature highlights several limitations of the key variables. Narcissism primarily focuses on the general construct rather than subclinical narcissism as a personal disorder. The Big Five Personality traits are examined through consistency in the literature. Clarifying these two variables strengthens the study's justification by demonstrating the theoretical rationale for exploring how narcissistic characteristics may influence financing choices. It also defines the scope of inquiry and establishes an explicit limitation: the analysis concentrates specifically on narcissism, Big Five personality traits, and funding preferences, recognising that other psychological and contextual factors might also be relevant but are outside the scope of this research.

5.16 Operationalisation and Measurement Scale - Hypothesis One (H₁) to Hypothesis Six (H₆)

Narcissism is the dependent variable (X); Hypothesis One (H1) and Hypothesis Six (H6) were based on the narcissism personality inventory. Respondents answered 40 questions, choosing between A and B, with one question designed to capture a narcissistic response. Narcissism can be further categorised into subscales that reflect traits such as exploitativeness, authoritativeness, superiority, self-sufficiency, entitlement, vanity, and exhibitionism. The variables were operationalised as narcissistic versus non-narcissistic responses. Since responses alternate between 'A' and 'B', respondents cannot discern a pattern. The responses were then reverse coded to classify narcissistic responses in comparison to non-narcissistic responses. It is important to emphasise that the research primarily focuses on the NPI scale as the key measure in the thesis. Therefore, narcissism is treated as the dependent variable, not the Big Five personality traits. This is detailed in the table below.

Table 18 Measurement of dependent variable (Y) Narcissistic Personality (NPI) Questions

NARCISSIM Variables	QUESTIONS	NARCISSM Subscale	SCALE (A or B) NARC ANSWER
NARC_Q1	A. I have natural talent for influencing people. B. I am not good at influencing people.	Authoritativeness	A. <u>NARC</u> B. NON-NARC
NARC_Q2	A. Modesty Does not become me. B. I am essentially a modest person.	Exhibitionism	A. <u>NARC</u> B. NON-NARC
NARC_Q3	A. I would do almost anything on a dare. B. I tend to be a cautious person.	Exhibitionism	A. <u>NARC</u> B. NON-NARC
NARC_Q4	A. When people compliment me, I sometimes get embarrassed. B. I Know that I am good because everybody keeps telling me so.	Superiority	A. NON-NARC B. <u>NARC</u>
NARC_Q5	A. The thought of ruling the world frightens the hell out of me. B. If I rule the world, it would be a better place.	Entitlement	A. NON-NARC B. <u>NARC</u>
NARC_Q6	A. I can usually talk my way out of anything. B. I try to accept the consequences of my behaviour.	Exploitativeness	A. <u>NARC</u> B. NON-NARC
NARC_Q7	A. I prefer to blend in with the crowd. B. I like to be the centre of attention.	Exhibitionism	A. NON-NARC B. <u>NARC</u>
NARC_Q8	A. I will be a success. B. I am not too concerned about success.	Authoritativeness	A. <u>NARC</u> B. NON-NARC
NARC_Q9	A. I am no better or worse than most people. B. I think I am special person.	Superiority	A. NON-NARC B. <u>NARC</u>
NARC_Q10	A. I am not sure if I would make a good leader. B. I see myself as a good leader.	Authoritativeness	A. NON-NARC B. <u>NARC</u>
NARC_Q11	A. I am assertive. B. I wish I were more assertive.	Authoritativeness	A. <u>NARC</u> B. NON-NARC
NARC_Q12	A. I like to have authority over other people. B. I don't mind following orders.	Authoritativeness	A. <u>NARC</u> B. NON-NARC
NARC_Q13	A. I find it easy to manipulate people. B. I don't like it when I find myself manipulating people.	Exploitativeness	A. <u>NARC</u> B. NON-NARC
NARC_Q14	A. I insist upon getting the respect that is due to me. B. I usually get the respect that I deserve.	Entitlement	A. <u>NARC</u> B. NON-NARC

NARC_Q15	A. I don't particularly like to show off my body. B. I like to show off my body.	Vanity	A. NON-NARC B. <u>NARC</u>
NARC_Q16	A. I can read people like a book. B. People are sometimes hard to understand.	Exploitativeness	A. <u>NARC</u> B. NON-NARC
NARC_Q17	A. If I feel competent, I am willing to take responsibility for making decisions. B. I like to take responsibility for making decisions	Self-Sufficiency	A. NON-NARC B. <u>NARC</u>
NARC_Q18	A. I just want to be reasonably happy. B. I want to amount to something in the eyes of the world.	Entitlement	A. NON-NARC B. <u>NARC</u>
NARC_Q19	A. My body is nothing special. B. I like to look at my body.	Vanity	A. NON-NARC B. <u>NARC</u>
NARC_Q20	A. I try not to show off. B. I will usually show off if I get the chance.	Exhibitionism	A. NON-NARC B. <u>NARC</u>
NARC_Q21	A. I always know what I am doing. B. Sometimes I am not sure if what I am doing.	Self- Sufficiency	A. <u>NARC</u> B. NON-NARC
NARC_Q22	A. I sometimes depend on people to get things done. B. I rarely depend on anyone else to get things done.	Self- sufficiency	A. NON-NARC B. <u>NARC</u>
NARC_Q23	A. Sometimes I tell good stories. B. Everybody likes to hear my voice.	Exploitativeness	A. NON-NARC B. <u>NARC</u>
NARC_Q24	A. I expect a great deal from other people. B. I like to do things for other people.	Entitlement	A. <u>NARC</u> B. NON-NARC
NARC_Q25	A. I will never be satisfied until I get all that I deserve. B. I take my satisfaction as they come.	Entitlement	A. <u>NARC</u> B. NON-NARC
NARC_Q26	A. Compliments embarrass me. B. I like to be complimented.	Superiority	A. NON-NARC B. <u>NARC</u>
NARC_Q27	A. I have a strong will to power. B. Power for its own sake doesn't interest me.	Entitlement	A. <u>NARC</u> B. NON-NARC
NARC_Q28	A. I don't care about new fads and fashions. B. I like to start new fads and fashions.	Exhibitionism	A. NON-NARC B. <u>NARC</u>
NARC_Q29	A. I like to look at myself in the mirror.	Vanity	A. <u>NARC</u>

	B. I am not particularly interested in looking at myself in the mirror.		B. <u>NON-NARC</u>
NARC_Q30	A. I really like to be the centre of attention. B. It makes me uncomfortable to be the centre of attention.	Exhibitionism	A. <u>NARC</u> B. <u>NON-NARC</u>
NARC_Q31	A. I can live my life in any way I want to. B. People can't always live their lives in terms of what they want.	Self- sufficiency	A. <u>NARC</u> B. <u>NON-NARC</u>
NARC_Q32	A. Being an authority doesn't mean that much to me. B. People always seem to recognise my authority.	Authoritativeness	A. NON-NARC B. NARC
NARC_Q33	A. I would prefer to be a leader. B. It makes little difference to me whether I am a leader or not.	Authoritativeness	A. <u>NARC</u> B. <u>NON-NARC</u>
NARC_Q34	A. I am going to be a great person. B. I hope I am going to be successful.	Self- sufficiency	A. <u>NARC</u> B. <u>NON-NARC</u>
NARC_Q35	A. People sometimes believe what I tell them. B. I can make anybody believe anything I want them to.	Exploitativeness	A. NON-NARC B. NARC
NARC_Q36	A. I am a born leader. B. Leadership is a quality that takes a long time to develop.	Authoritativeness	A. <u>NARC</u> B. <u>NON-NARC</u>
NARC_Q37	A. I wish somebody would someday write my biography. B. I don't like people to pry into my life for any reason.	Superiority	A. <u>NARC</u> B. <u>NON-NARC</u>
NARC_Q38	A. I get upset when people don't notice how I look when I go out in public. B. I don't mind blending into the crowd when I go out in public.	Exhibitionism	A. <u>NARC</u> B. <u>NON-NARC</u>
NARC_Q39	A. I am more capable than other people. B. There is a lot that I can learn from other people.	Self- sufficiency	A. <u>NARC</u> B. <u>NON-NARC</u>
NARC_Q40	A. I am much like everybody else. B. I am an extraordinary person.	Superiority	A. NON-NARC B. NARC

Hypothesis 1 (H₁): Null and Alternative

- H₀₁: There is no significant association between narcissism and openness to experience amongst UK entrepreneurs.

- H_{11} : There is a significant positive association between narcissism and openness to experience amongst UK entrepreneurs.

Hypothesis 1 (H_1) will be analysed using *simple linear regression to examine the association between Openness to experience and Narcissism among UK entrepreneurs.*

$$y = a + bx$$

$$y = \beta_0 + \beta_1 x + \varepsilon$$

Y: is the dependent variable; Narcissism

X: is the independent variable; Openness to experience

$$Narc = a + bOpen$$

$$Narc = \beta_0 + \beta_1 Open + \varepsilon$$

$Narc$ = Narcissism,

$Open$ = Openness to Experience

Openness to experience represents the independent variable (X). The questions below were operationalised based on the Big Five theory, and respondents were asked to select from 1-5 (strongly disagree to strongly agree) on a Likert scale. This was then coded in SPSS. The variable measurement for X was operationalised based on the questions below on openness to experience in the Table below.

Table 19 Measurement of the Independent variable (X), openness to experience

OPENNESS TO EXPERIENCE Variables	QUESTIONS	SCALES (Likert Scale)
	<i>I See Myself as Someone who</i>	1- <i>Strongly Disagree,</i> 2- <i>Disagree,</i> 3- <i>Neutral,</i> 4- <i>Agree,</i> 5- <i>Strongly Agree</i>
OPEN_Q5	Is original, comes up with new ideas	Likert Scale 1-5
OPEN_Q10	Is curious about many different things	Likert Scale 1-5
OPEN_Q15	Is ingenious, a deep thinker	Likert Scale 1-5
OPEN_Q20	Has an active imagination	Likert Scale 1-5
OPEN_Q25	Is Inventive	Likert Scale 1-5
OPEN_Q30	Values artistic, and aesthetic experiences	Likert Scale 1-5

OPEN_Q35R	Prefers work that is routine	Likert Scale 1-5
OPEN_Q40	Likes to reflect, play with idea	Likert Scale 1-5
OPEN_Q41R	Has few artistic interests	Likert Scale 1-5
OPEN_Q44	Is Sophisticated in art, music, or literature	Likert Scale 1-5

Hypothesis 2 (H₂): Null and Alternative

- H₀₂: There is no significant association between narcissism and conscientiousness amongst UK entrepreneurs.
- H₁₂: There is a significant negative association between narcissism and conscientiousness amongst UK entrepreneurs.

Hypothesis 2 (H₂) will be analysed using *simple linear regression to examine the association* between narcissism and **conscientiousness** among UK entrepreneurs.

$$y = a + bx$$

$$y = \beta_0 + \beta_1 x + \varepsilon$$

Y: is the dependent variable; Narcissism

X: is the independent variable; conscientiousness

$$Narc = a + bCons$$

$$Narc = \beta_0 + \beta_1 Cons + \varepsilon$$

Narc=Narcissism,
Cons=Conscientiousness

Conscientiousness represents the independent variable (X). The questions below were operationalised based on the Big Five theory, and respondents were asked to select from 1-5, with 1 = strongly disagree and 5 = strongly agree. This was measured on a Likert scale and coded according to respondents' answers.

Table 20 Measurement of the independent variable (X) conscientiousness

CONSCIENTIOUSNESS Variables	QUESTIONS	SCALES (Likert Scale)
	I See Myself as Someone who	1- <i>Strongly Agree</i> , 2- <i>Disagree</i> , 3- <i>Neutral</i> , 4- <i>Agree</i> , 5- <i>Strongly Disagree</i>
CONS_Q3	Does a thorough job	Likert Scale 1-5
CONS_Q8R	Can be somewhat careless	Likert Scale 1-5
CONS_Q13	Is a reliable worker	Likert Scale 1-5
CONS_Q18R	It tends to be disorganised.	Likert Scale 1-5
CONS_Q23R	He tends to be lazy.	Likert Scale 1-5
CONS_Q28	Perseveres until the task is finished	Likert Scale 1-5
CONS_Q33	Does things efficiently	Likert Scale 1-5
CONS_Q38	Makes plans and follows through with them	Likert Scale 1-5
CONS_Q43R	Is easily distracted	Likert Scale 1-5

Hypothesis 3 (H₃): Null and Alternative

- H₀₃: There is no significant association between narcissism and extraversion amongst UK entrepreneurs.
- H₁₃: There is a significant positive association between narcissism and extraversion amongst UK entrepreneurs.

Hypothesis 3 (H₃) will be analysed using ***simple linear regression to examine the association*** between ***extraversion*** and narcissism among UK entrepreneurs.

$$y = a + bx$$

$$y = \beta_0 + \beta_1 x + \varepsilon$$

Y: is the dependent variable; Narcissism

X: is the independent variable; Extraversion

$$Narc = a + bExtra$$

$$Narc = \beta_0 + \beta_1 Extra + \epsilon$$

Narc = Narcissism,
Extra = Extraversion

Extraversion represents the independent variable (X). The questions below were operationalised based on the Big Five theory, and respondents were asked to select from 1 (strongly disagree) to 5 (strongly agree). Below is the operationalisation of the survey measurement used to assess extraversion (Y). Narcissism was measured using the NPI40, and extraversion was measured using the BPI scale.

Table 21: Measurement of the independent variable (x) extraversion

EXTRAVERSION Variables	QUESTIONS	SCALES (Likert Scale)
	I See Myself as Someone who	<ol style="list-style-type: none"> 1. <i>Strongly Agree,</i> 2. <i>Disagree,</i> 3. <i>Neutral,</i> 4. <i>Agree,</i> 5. <i>Strongly Disagree</i>
EXTR_Q1	Is Talkative	Likert Scale 1-5
EXTR_Q6R	Is reserved	Likert Scale 1-5
EXTR_Q11	It is full of Energy	Likert Scale 1-5
EXTR_Q16	Generates much enthusiasm	Likert Scale 1-5
EXTR_Q21R	Tends to be quiet	Likert Scale 1-5
EXTR_Q26	Has an assertive personality	Likert Scale 1-5
EXTR_Q31R	Is sometimes shy, inhibited	Likert Scale 1-5
EXTR_Q36	Is outgoing, sociable	Likert Scale 1-5

Hypothesis 4 (H4): Null and Alternative

- H_04 : There is no significant association between narcissism and agreeableness amongst UK entrepreneurs.
- H_{14} : There is a significant negative association between narcissism and agreeableness amongst UK entrepreneurs.

Hypothesis 4 (H4) will be analysed using ***simple linear regression to examine the association*** between ***agreeableness*** and narcissism among UK entrepreneurs.

$$y = a + bx$$

$$y = \beta_0 + \beta_1 x + \epsilon$$

Y: is the dependent variable; Narcissism

X: is the independent variable; Agreeableness

$$\begin{aligned} \mathbf{Narc} &= a + b \mathbf{Agree} \\ \mathbf{Narc} &= \beta_0 + \beta_1 \mathbf{Agree} + \epsilon \end{aligned}$$

$Narc$ = Narcissism,

$Agree$ = Agreeableness

Agreeableness functions as the independent variable (X). The questions below were operationalised based on the Big Five theory, with respondents asked to rate each item on a scale from 1 to 5, from strongly disagree to strongly agree. Below is the operationalisation of the survey measure used to assess the independent variable (X), agreeableness. Narcissism was measured using the NPI40, and agreeableness was measured using the BPI scale.

Table 22: Measurement for the independent variable (x) for agreeableness

AGREEABLENESS Variables	QUESTIONS	SCALES (Likert Scale)
	I See Myself as Someone who	<ol style="list-style-type: none"> 1. <i>Strongly Agree,</i> 2. <i>Disagree,</i> 3. <i>Neutral,</i> 4. <i>Agree,</i> <i>Strongly Disagree</i>
AGRE_Q2R	Tends to find fault with others	Likert Scale 1-5
AGRE_Q7	Is helpful and unselfish with others	Likert Scale 1-5
AGRE_Q12R	Starts quarrels with others	Likert Scale 1-5
AGRE_Q17	Has a forgiving nature	Likert Scale 1-5
AGRE_Q22	Is generally trusting	Likert Scale 1-5
AGRE_Q27R	Can be cold and aloof	Likert Scale 1-5
AGRE_Q32	Is considerate and kind to almost everyone	Likert Scale 1-5
AGRE_Q37R	Is sometimes rude to others	Likert Scale 1-5
AGRE_Q42	Likes to cooperate with others	Likert Scale 1-5

Hypothesis 5 (H₅): Null and Alternative

- H₀₅: There is no significant association between narcissism and neuroticism amongst UK entrepreneurs.
- H₁₅: There is a significant negative association between narcissism and neuroticism amongst UK entrepreneurs.

Hypothesis 5 (H₅) will be analysed using ***simple linear regression*** to examine the association between ***Neuroticism*** and ***narcissism*** among UK entrepreneurs.

$$y = a + bx$$

$$y = \beta_0 + \beta_1 x + \varepsilon$$

Y: is the dependent variable; Narcissism

X: is the independent variable; Neuroticism

$$Narc = a + bNeuro$$

$$Narc = \beta_0 + \beta_1 Neuro + \varepsilon$$

Narc = *Narcissism*,

Neuro = *Neuroticism*

Neuroticism serves as the independent variable (X). The questions below were operationalised based on the Big Five theory, and respondents were asked to select a response from 1 to 5, where 1 = strongly disagree and 5 = strongly agree. The following outlines how the survey measurement for the independent variable (X), neuroticism, was operationalised. The dependent variables (Y) were measured as narcissism using the NPI-40 and neuroticism using the BPI scale.

Table 23 Measurement of the independent variable (X) for neuroticism

NEUROTICISM Variables	QUESTIONS I See Myself as Someone who	SCALES (Likert Scale) 1. <i>Strongly Agree</i> , 2. <i>Disagree</i> , 3. <i>Neutral</i> , 4. <i>Agree</i> , 5. <i>Strongly Disagree</i>
NEUR_Q4	Agree a little	Likert Scale 1-5
NEUR_Q9R	Is relaxed and handles stress well.	Likert Scale 1-5

NEUR_Q14	Can be tense	Likert Scale 1-5
NEUR_Q19	Worries a lot	Likert Scale 1-5
NEUR_Q24R	Is emotionally stable, not easily upset	Likert Scale 1-5
NEUR_Q29	Can be moody	Likert Scale 1-5
NEUR_Q34R	Remains calm in a tense situation	Likert Scale 1-5
NEUR_Q39	Gets nervous easily	Likert Scale 1-5

Hypothesis 6 (H₆): Null and Alternative

- H₀₆: There is no significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs.
- H₁₆: There is a significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs.

Hypothesis 6 (H₆) will be analysed using ***multiple linear regression***. to examine the association between ***Big Five Personality*** and ***narcissism*** among UK entrepreneurs.

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \epsilon$$

Y: is the dependent variable, which is Narcissism

X: is the independent variable; Components of Big Five Personalities: Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism

$$Narc = \beta_0 + \beta_1 Open + \beta_2 Cons + \beta_3 Extra + \beta_4 Agree + \beta_5 Neuro + \epsilon$$

Where *Narc* - Narcissism

BFI = Big Five Personality Components

Open = Openness to Experience

Cons = Conscientiousness

Extra = Extraversion

Agree = Agreeableness

Neuro = Neuroticism

The independent variables (X) are the Big Five personality traits: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. The variables were

operationalised using the Big Five personality questionnaire. The dependent variable is narcissism, operationalised by the NPI-40.

5.17 Operationalisation and Measurement Scales- Hypothesis Seven (H₇) to Hypothesis Nine (H₁₀)

Hypothesis Seven (7) (H₇): Null and Alternative

- H₀₇: Narcissism does not significantly influence the preference for internal versus external funding amongst UK entrepreneurs.
- H₁₇: Narcissism significantly influences the preference for internal versus external funding amongst UK entrepreneurs.

As discussed in previous sections, the independent variable (X) is narcissism (NP140), operationalised by the NPI-40 scale. The dependent variable (Y) is the response to the question in the table regarding preference for internal or external funding. Hypothesis 7 (H₇) will be analysed using the ***binary logistic regression***.

The probability of observing 0 or 1 is treated as dependent on one or more explanatory variables. The equation below operationalises the equation.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + u_i$$

With a binary dependent variable, Y is called the linear probability model.

$$E(Y|X_1, X_2, \dots, X_k) = P(Y = 1|X_1, X_2, \dots, X_k)$$

Whereby.

$$P(Y = 1|X_1, X_2, \dots, X_k) = \beta_0 + \beta_1 + X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

$$\text{logit}(P(Y=1)) = \beta_0 + \beta_1 (\text{Narcissism}) + \dots + u_i$$

Y is the dependent variable, which is UK entrepreneurs' preference for the source of funding, internal or external. UK entrepreneurs were asked which funding source they preferred: dichotomous, with a binary logistic regression group of 0 and 1.

X: is the independent variable; Narcissism

Table 24 Measurement of the dependent variable (Y) UK Entrepreneurs' preference for internal funding in comparison to external funding

Funding Preference (250 Respondents)	Respondents were asked what their funding preferences were
FUNDING PREFERENCE - Which do you prefer, internal or external funding?	Internal sources of funding, personal funds, family, and friends
	External sources of funding, bank loans, equity from investors
	No Response

Hypothesis Eight (8a) (H_{8a}): Null and Alternative

- H_{08a}: Amongst narcissistic UK entrepreneurs, openness to experience does not significantly influence preference for external funding.
- H_{18a}: Amongst narcissistic UK entrepreneurs, openness to experience significantly influences preference for external funding.

Independent variables (X) are narcissism (NP140), and openness (BFI), and the operationalisation of the scales was discussed in previous sections. The dependent variable (Y) is the response to the question in Table 17 above, in which UK entrepreneurs were asked whether they preferred internal to external funding. Hypothesis 8a (H_{8a}) will be analysed using the ***binary logistic regression***.

The probability of observing a 0 or 1 is treated as dependent on one or more explanatory variables.

The equation below operationalises the equation.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + u_i$$

With a binary dependent variable, Y_i is called the linear probability model.

$$E(Y|X_1, X_2, \dots, X_k) = P(Y = 1|X_1, X_2, \dots, X_k)$$

Whereby.

$$P(Y = 1|X_1, X_2, \dots, X_k) = \beta_0 + \beta_1 + X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

$$\text{logit}(P(Y=1)) = \beta_0 + \beta_1(\text{Narcissism}) + \beta_2(\text{Openness}) + \dots + u_i$$

Y is the dependent variable, which is the UK entrepreneurs' preference for the source of funding, internal or external. UK entrepreneurs were asked which funding source they preferred: dichotomous, with a binary logistic regression group of 0 and 1.

X: are the independent variables: Narcissism, and Openness to experience

Hypothesis Eight (8b) (H_{8b}): Null and Alternative

- H_{08b}: Amongst narcissistic UK entrepreneurs, extraversion does not significantly influence preference for external funding.
- H_{18b}: Amongst narcissistic UK entrepreneurs, extraversion significantly influences preference for external funding.

Independent variables (X) are narcissism (NP140), agreeableness (BFI) and extraversion (BFI), and the operationalisation of the scales was discussed in previous sections. The dependent variable (Y) is the response to the question in Table 24 above, in which UK entrepreneurs were asked whether they preferred internal to external funding. Hypothesis 8b (H_{8b}) will be analysed using the ***binary logistic regression***.

The probability of observing a 0 or 1 is treated as dependent on one or more explanatory variables. The equation below operationalises the equation.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + u_i$$

With a binary dependent variable, Y_i is called the linear probability model.

$$E(Y|X_1, X_2, \dots, X_k) = P(Y = 1|X_1, X_2, \dots, X_k)$$

Whereby.

$$P(Y = 1|X_1, X_2, \dots, X_k) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

$$\text{logit}(P(Y=1)) = \beta_0 + \beta_1(\text{Narcissism}) + \beta_2(\text{Extraversion}) + \dots + u_i$$

Y is the dependent variable, which is UK entrepreneurs' preference for the source of funding, internal or external. UK entrepreneurs were asked which funding source they preferred: Dichotomous and based on a binary logistics group of 0 and 1.

X: is the independent variables: Narcissism, and Extraversion

Hypothesis 9 (H₉): Null and Alternative

- H₀₉: Narcissism, openness to experience, and extraversion do not significantly influence the likelihood of successfully obtaining external funding among UK entrepreneurs.
- H₁₉: Narcissism, openness to experience, and extraversion significantly influence the likelihood of successfully obtaining external funding among UK entrepreneurs.

UK entrepreneurs' personalities, narcissism, openness to experience, and extraversion influence the successful obtaining of external funding. Given the behaviours of narcissists, measuring and operationalising whether the entrepreneurs received external funding was essential, as preference is different from actual success in obtaining financing. Hypothesis 9 (H₉) will be analysed using the ***binary logistics regression***.

The hypothesis will be analysed using Binary Logistic Regression (SPSS), where the dependent variable takes values of 0 or 1.

The probability of observing a 0 or 1 depends on one or more explanatory variables.

The equation below is the operationalisation of the original equation.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + u_i$$

When the dependent variable is binary, the model is called the linear probability model.

$$E(Y|X_1, X_2, \dots, X_k) = P(Y = 1|X_1, X_2, \dots, X_k)$$

Whereby.

$$P(Y = 1|X_1, X_2, \dots, X_k) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

$$\text{logit}(P(Y=1)) = \beta_0 + \beta_1(\text{Narcissism}) + \beta_2(\text{Openness}) + \beta_3(\text{Extraversion}) + \dots + u_i$$

Y: is the dependent variable, UK entrepreneurs' success in obtaining funding on the first attempt

UK entrepreneurs were asked whether they successfully obtained external funding on their first attempt. The answer is yes or no, which is dichotomous and based on a binary logistic variable of 0 and 1.

X: is the independent variables: Narcissism, Openness to experience and Extraversion

Table 25 Measurement of the dependent variable (y) UK Entrepreneurs successfully obtaining funding 'yes's and 'No'

		Respondents were asked to select the most suitable response.
Successful at external funding at first attempt (250 Respondents)		
		Yes
		No
		Don't know
		No Response
		Total

Hypothesis 10 (H₁₀): Null and Alternative

- **H₀₁₀:** Personality traits (narcissism, openness to experience, extraversion) have no significant effect on funding success after controlling for socio-economic characteristics.
- **H₁₀:** Personality traits (narcissism, openness to experience, extraversion) significantly affect funding success after controlling for socio-economic characteristics.

Given the behaviours of narcissists, it was important to examine socio-economic control variables, such as measuring and operationalising whether entrepreneurs received external funding, which was essential, as preference for financing differs from actual success in obtaining financing. Hypothesis 10 (H₁₀) will be analysed using the ***binary logistic regression***.

The hypothesis will be analysed using Binary Logistic Regression (**SPSS**), ***in which the dependent variable takes values of 0 or 1.***

The probability of observing a 0 or 1 depends on one or more explanatory variables.

The equation below is the operationalisation of the equation.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + u_i$$

With a binary dependent variable, Y_i is called the linear probability model.

$$E(Y|X_1, X_2, \dots, X_k) = P(Y = 1|X_1, X_2, \dots, X_k)$$

Whereby.

$$P(Y = 1|X_1, X_2, \dots, X_k) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

$$\text{logit}(P(Y=1)) = \beta_0 + \beta_1(\text{Narcissism}) + \beta_2(\text{Openness}) + \beta_3(\text{Extraversion}) + \beta_4(\text{Age}) + \beta_5(\text{Gender}) + \beta_6(\text{Education}) + \beta_7(\text{Ethnicity}) + \beta_8(\text{Experience}) + \beta_9(\text{Business Size}) + \beta_{10}(\text{Industry}) + u_i$$

Y: is the dependent variable, UK entrepreneurs' success in obtaining funding at the first attempt

UK entrepreneurs were asked whether they successfully obtained external funding on their first attempt. The answer is yes or no, which is Dichotomous and based on a binary logistic group of 0 and 1.

X: are the independent variables: Narcissism, Openness to experience and Extraversion

Table 26 Measurement of the dependent variable (Y): UK Entrepreneurs successfully obtaining funding, 'yes' and 'No'

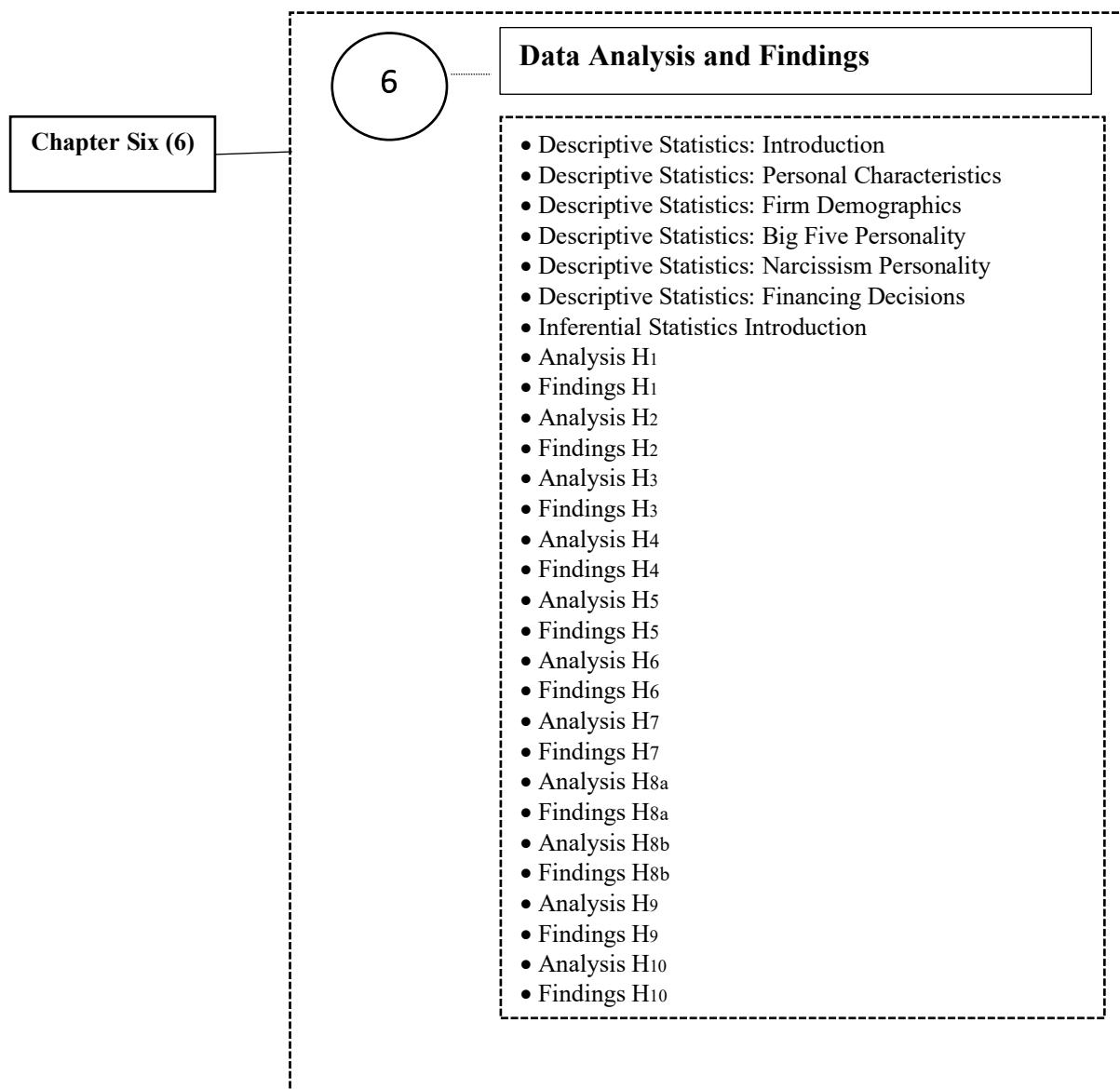
Respondents were asked to select the most suitable response.	
Successful at external funding at first attempt (250 Respondents)	
	Yes
SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful in acquiring financing on your first attempt?	No
	Don't know
	No Response
	Total

CHAPTER SIX (6) DATA ANALYSIS AND FINDINGS

6.1 Introduction

This chapter discusses the research analysis by examining the statistical outcomes and data analysis of research used by SMEs in the UK. It also discusses the outcomes of descriptive and inferential statistics. This section discusses the entrepreneur's personal characteristics, firm demographics, the Big Five personality traits, narcissism, and the statistical results and tables for the Hypothesis. Figure 16 summarises the research analysis and descriptive and inferential statistics outcomes.

Figure 15: Structure of Chapter Six (6)



6.2 Descriptive Statistics Introduction

The survey questionnaire was created to collect data on personality traits and Big Five theory, including narcissism, as well as individual and firm demographics, business ownership, funding received, and funding preferences. It used the scales discussed in the previous chapter to assess the entrepreneur's Big Five Inventory (BFI) personality and to explore possible links between narcissism and funding decisions. The survey is included in Appendix D. It starts by gathering data on the Big Five personality traits: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. The questionnaire then covers forty-four (44) questions related to the entrepreneur's personality. It was piloted with 40 entrepreneurs to evaluate reliability and validity. Based on the results and discussion from the previous chapter, the instruments were deemed reliable and valid, and, therefore, one revision of the questions was incorporated into the final questionnaires. The study explicitly investigates extraversion and openness to identify similarities with narcissism. Following this, the survey assesses narcissism by asking participants 40 questions designed to measure narcissistic traits using the NPI40. The questions used to gather personality data captured all relevant information for the independent variable. This chapter presents the statistical results and analyses related to the hypothesis.

6.3 Descriptive Statistics- Personal Characteristics

From the 250 respondents, survey questions were asked about their personal characteristics and control variables were asked about entrepreneurs. Entrepreneurs were asked whether they were owners-founders of their businesses.

Table 27 Summary UK entrepreneurs demographics

250 Respondents		Count 'No. of Respondents	Table N %
PRIMARY FOUNDER - Are you the owner/founder of the business?	Yes No Total	238 12 250	95.20% 4.80% 100.00%
AGE - What is your age?	Under 22 22-33 34-45 46-65 66-75 76+ Total	4 73 89 78 6 0 250	1.60% 29.20% 35.60% 31.20% 2.40% 0.00% 100.00%
BIOLOGICAL GENDER - What is your biological gender?	Male Female Other Rather not say Total	132 114 1 3 250	52.80% 45.60% 0.40% 1.20% 100.00%
MARITAL STATUS - What is your marital status?	Single, never married Married Domestic partnership Separated Divorced Widowed Total	106 91 38 4 10 1 250	42.40% 36.40% 15.20% 1.60% 4.00% 0.40% 100.00%
ETHNICITY - What is your ethnicity?	White – British White- Irish Any other white background Mixed – White and Black Caribbean Mixed – White and Black African Mixed- White and Asian Any other mixed background Asian or Asian British – Indian Asian or Asian British Pakistani Asian or Asian British – Bangladeshi Any other Asian background Black or Black British – Caribbean Black or Black British – African Any other Black background Chinese Gypsy or Traveller Arab Other Ethnic Background Total	168 7 17 5 1 3 4 5 3 2 2 18 1 2 0 1 3 250	67.20% 2.80% 6.80% 2.00% 0.40% 1.20% 1.60% 2.00% 1.20% 0.80% 0.80% 3.20% 7.20% 0.40% 0.80% 0.00% 0.40% 1.20% 100.00%

Of the 250 respondents, 95.2% were business owners, while 4.8% were not primary owners. This means that, at most, 95.2% of the information came from individuals recognised as the main decision-makers in their businesses. Among the respondents, 35.6% were aged 34-45, 31.2% 46-65, 29.2% 22-33, 1.6% under 22, and 2.4% 66-75. There were no respondents over 76. Regarding gender, 52.8% were male entrepreneurs, 45.6% female, 1.2% preferred not to say, and 0.4% identified as other. In terms of marital status, 42.4% were single and never married, 36.4% married, 15% in a domestic relationship, 1.6% separated, 4.0% divorced, and 0.4% widowed. The respondents' ethnic backgrounds were also analysed: the majority identified as White British (67.2%), 7.2% as Black or Black British African, 3.2% as Black or Black British Caribbean, and 6.8% as other. White background. Further, 2.8% were White Irish, 2% mixed Black and White Caribbean, 2% Asian or Asian British, 2.0% were Indian, and the remaining were from other ethnic backgrounds.

Table 28 Summary of UK entrepreneurs' respondents' education and business experience background

250 Respondents		Count 'No. of Respondents	Table N %
EDUCATION - What is your highest level of Education?	No academic qualifications	1	0.40%
	O- levels/ GCSE/Scottish O- grades	20	8.00%
	A- levels/ Scottish Highers	26	10.40%
	HND/HNC	5	2.00%
	City and Guilds/ NVQ	16	6.40%
	Professional qualifications e.g. CA CIMA ACCA CEng MIPD	13	5.20%
	Undergraduate degree	111	44.40%
	Postgraduate degree - Masters	53	21.20%
	Postgraduate degree - Doctoral	5	2.00%
	Other	0	0.00%
Total		250	100.00%
BUSINESS_YEARS_EXPERIENCE - How many years' experiences do you have managing and owning a business?	Less than 1 year ago	12	4.80%
	1-3 years ago,	66	26.40%
	4-6 years ago,	59	23.60%
	7-9 years ago,	26	10.40%
	10-15 years ago,	43	17.20%
	More than 15 years ago	39	15.60%
	Unknown	3	1.20%
	Rather than say	2	0.80%

	<i>Total</i>	250	100.00%
STARTUP_REASON - What was the principal reason you/the owner started this business?	To make money	60	24.00%
	Had a good business idea	24	9.60%
	To be my boss/ desire for independence	103	41.20%
	To fulfil a life's ambition/ personal goals	33	13.20%
	Entrepreneurship runs in the family/parent(s) are /were entrepreneurs	4	1.60%
	Lack of other jobs/opportunities	5	2.00%
	Inherited/took over business	2	0.80%
	Frustrated with 9-5 job	9	3.60%
	Other reasons	10	4.00%
	Total	250	100.00%

The respondent was asked about their educational background. This offered further insight into their business knowledge, as participants had attended a formal educational institution. 44.4% of respondents hold an undergraduate degree, 21.2% have a postgraduate master's degree, 10.4% have A levels/Scottish Highers, 8.0% have O levels/GCSE, 6.4% possess City and Guilds/NVQ qualifications, 5.2% have a professional qualification such as CIMA or ACCA, a further 2.0% hold a postgraduate doctoral degree, and 0.4% have no academic qualification. Respondents were asked about the number of years they have been managing and owning a business. 26.4% have been running their business for 1-3 years, 23.6% for 4-6 years, 17.2% for 10–15 years, and 15.5% for more than 15 years. Additionally, 4.8% started their business within less than a year.

The respondents were asked what the primary reason for starting a business was, and 41.2 %'s main reason for starting a business was to become their boss and gain independence, 24.0% agreed that they started a business to make money, 13.2% wanted to start a business to complete life goals and ambition, 9.6% stated that they had a good business idea. In comparison, 3.6 % were frustrated with their 9-5 job, 2.0% lacked employment and career opportunities, 1.6% stated that entrepreneurship ran in the family, and 4% provided other reasons. When interpreting the data, it is essential to understand the respondents' educational and ethnic backgrounds.

6.4 Descriptive statistics- Business Demographics

The 250 respondents were asked questions about their businesses, yielding insights into the demographics of the businesses they operate. This section will summarise these firm demographics.

Table 29 Summary of firm ownership and structure

250 Respondents		Count 'No. of Respondents	Table N %
YEARS_OPERATION - How many years has the business been in operation?	0-1 year	24	9.60%
	2-3 years	71	28.40%
	4-5 years	36	14.40%
	Above 5 years	119	47.60%
	Total	250	100.00%
BUSINESS_PURPOSE - Is the business run for?	Profit	234	93.60%
	As a social enterprise	8	3.20%
	Not for profit (Charities)	7	2.80%
	Other	1	0.40%
	Total	250	100.00%
OWNERSHIP STRUCTURE - What is the ownership structure of the business?	Owned personally	206	82.40%
	Jointly owned	44	17.60%
	Total	250	100.00%
BUSINESS_REGISTRATION - Is the business registered?	Yes	171	68.40%
	No	79	31.60%
	Total	250	100.00%
REGISTRATION_TYPE - What is the ownership structure of the business?	Sole proprietorship (single owner)	171	68.40%
	Partnership	23	9.20%
	Limited liability partnership	6	2.40%
	Limited Liability Company (private limited company, public limited company, private unlimited company)	50	20.00%
	Total	250	100.00%
OWNER_NO_YEARS_EXPERIENCE - How many years of experience have you/has the owner had managing or owning a business, including this business?	Less than 1 year ago	18	7.20%
	1-3 Years ago,	63	25.20%
	4-6 years ago,	55	22.00%
	7-9 years ago,	26	10.40%
	10-15 years ago,	42	16.80%
	More than 15 years ago	46	18.40%
	Other (Specify)	0	0.00%
	Total	250	100.00%

BUSINESS_ESTABLISHED_TYPE - Did you establish the business, or was the business established by one or more of the following	Established	243	97.20%
	Purchased	4	1.60%
	Inherited	2	0.80%
	Acquired Gift	1	0.40%
	Total	250	100.00%
BUSINESS_ESTABLISHED_TYPE - Did you establish the business, or was the business established by one or more of the following	Established	243	97.20%
	Purchased	4	1.60%
	Inherited	2	0.80%
	Acquired Gift	1	0.40%
	Total	250	100.00%

Respondents were asked how long their business had been in operation; 47.6% said more than 5 years, 28.4% said 2-3 years, 14.4% said 4-5 years, and 9.6% said less than 1 year. Therefore, more than 5 respondents had been operating their business for 4 years or more. The respondents were asked what the purpose of the business was; 93.6% stated that the company was run to make profits, 3.2% ran the company as a social enterprise, and 2.8% selected no for-profit (charities). Therefore, a significant percentage of the population was profit-driven. When the respondents were asked whether their business was personally or jointly owned, 82.4% owned their business, while 17.6% had a jointly owned business. This meant that 82.4% of respondents wholly owned decisions regarding their entities' funding and success. The respondents were asked whether their business was registered. Based on the response, 68.4% of businesses were registered, while 31.6% were not. When respondents were asked whether the business was registered, 68.4% were registered as sole proprietors, 20% as limited liability companies, 9.2% as partnerships, and 2.4% as limited liability partnerships. The respondents were asked the number of years' experience they had in entrepreneurship and owning a business; 25.2% of the entrepreneurs had 1-3 years' experience in operating a business, 22.0% owned and operated a business for 4-6 years, 18.4% owned and operated more than 15 years ago, 16.8% operated a business for over 10-15 years, 10.4% operated a business for 7-9 years, and the remaining 7.2% had less than 1 year ago. The respondents were asked whether they established, purchased, inherited, or acquired a gift. Based on a sample of 250 entrepreneurs, 97.2% were purchased, 1.6% were inherited, and the remaining 0.4% were acquired as gifts.

Table 30 Summary of firm employees, industry, region and turnover.

250 Respondents		Count 'No. of Respondents	Table Total N %
NO_OF_EMPLOYEES - How many people, including you, work in this business?	1	138	55.20%
	2-10	92	36.80%
	11-49	16	6.40%
	50-99	2	0.80%
	100-199	0	0.00%
	200-249	1	0.40%
	250+	1	0.40%
	Total	250	100.00%
INDUSTRY - What industry is most related to the enterprise?	Construction	9	3.60%
	Professional, scientific, and technical	18	7.20%
	Wholesale and retail	52	20.80%
	Administrative and support services activities	11	4.40%
	Other service activities	14	5.60%
	Human health and social work activities	9	3.60%
	Transportation and storage	0	0.00%
	Information and communication	15	6.00%
	Education	14	5.60%
	Arts, entertainment, and recreation	57	22.80%
	Manufacturing	4	1.60%
	Accommodation and food services	5	2.00%
	Real estate activities	10	4.00%
	Financial and Insurance activities	8	3.20%
	Agriculture, hunting, forestry, and fishing	6	2.40%
	Production activities	1	0.40%
	Other	17	6.80%
	Total	250	100.00%
UK_REGION - What region are you located in in the United Kingdom?	London	44	17.60%
	Southeast	29	11.60%
	East of England	13	5.20%
	Southwest	26	10.40%
	Northwest	31	12.40%
	West Midlands	24	9.60%
	Yorkshire and the Humber	21	8.40%
	East Midlands	18	7.20%
	Scotland	20	8.00%
	Wales	12	4.80%
	Northeast	7	2.80%
	Northern Ireland	5	2.00%

	Total	250	100.00%
TURNOVER- What was your turnover for the last financial year	< £25,000	125	50.00%
	£25,000-49,999	46	18.40%
	£50,000-74,999	12	4.80%
	£75,000-99,999	12	4.80%
	£100,000- 499,999	25	10.00%
	£500,000- 9,999,999	7	2.80%
	£1m – 4.9 m	5	2.00%
	£5m-9.9m	1	0.40%
	£10m- 49.9m	1	0.40%
	£50m+	0	0.00%
	Don't Know	5	2.00%
	Refused	11	4.40%
	Other	0	0.00%
Total		250	100.00%

The UK entrepreneurs were asked how many employees worked for their business, including themselves. 55.2% responded that they were the only employee, 36.8% said they had 2-10 employees, 6.4% had 11-49 employees, 0.8% had 50-199 employees, and 0.4% had 200-249 employees. Respondents were also asked about their industry; 22.8% were in arts and entertainment, 20.8% in wholesale and retail, 7.2% in professional, scientific, and technical services, 6.0% in information and communication, and 5.6% in education services. Further, respondents indicated their location: 17.6% are based in London, 12.4% in the Northwest, 11.6% in the Southeast, 9.6% in the West Midlands, 8.4% in Yorkshire and the Humber, 8.0% in Scotland, 7.2% in the East Midlands, 4.8% in Wales, 2.8% in the Northeast, and 2.0% in Northern Ireland. Regarding turnover within the last financial year, 125 respondents, or 50%, reported a turnover of less than £25,000, while the remaining 46, approximately 18.4%, reported turnover between £25,000 and £49,999. Additionally, 25 respondents, or 10%, earned between £100,000 and £499,999; 4.8% earned between £50,000 and £74,999; another 4.8% earned between £75,000 and £99,999; and 7 respondents, about 2%, reported a turnover of £500,000 to £9,999,999.

6.5 Descriptive Statistics- Big Five Personality

From the 250 respondents, survey questions were asked about the Big Five personality traits (BFI). The respondents were asked whether they were more open to experience, conscientious, extraverted, agreeable, or neurotic. Openness to experience is characterised by traits such as imagination, unconventionality, autonomy, creativity, and divergent thinking. These traits help entrepreneurs stay open-minded to new opportunities and develop new businesses. Openness to experience is also associated with being imaginative, curious, and flexible. Conscientiousness relates to the ability to think clearly before acting, delay gratification, follow norms and rules, and plan and organise tasks. Characteristics of conscientiousness also include being dependable, dutiful, responsible, and highly achievement-oriented. These traits emphasise moral obligations, hard work, and purposefulness. Such individuals are most likely to do the right thing for themselves and others. The conscientious individual also exhibits leadership qualities and is more than capable of running a business. Extraversion is the lively approach to the social world and includes traits such as sociability, activity, assertiveness, and positive emotionality. Extraverts tend to be energetic, expressive, enthusiastic, and ambitious. They relate more easily to their environment and display positive emotions. The entrepreneurial process and role are very attractive to extroverts, as they involve dominance, adventure, pleasure-seeking, and ambition. Entrepreneurs need to spend more time engaging with various stakeholders and are considered to be well-suited to extroverts. Entrepreneurs enjoy building and managing teams and promoting new venture ideas to employees, investors, and customers, which likely suits extroverts. Individuals who are agreeable possess characteristics such as warmth, generosity, trustworthiness, and cooperativeness. Overall, these individuals tend to be warm, courteous, trustworthy, and cooperative. High in agreeableness, they seem to be good-natured, considerate, and tolerant, while those less agreeable can appear more manipulative. People who are agreeable are likely to consider others' interests, avoid conflicts, cooperate, and help others to maintain relationships. Research has shown that high levels of agreeableness may correlate with business failure.

The neuroticism trait involves feeling anxious, nervous, sad, and tense. Neuroticism indicates the degree to which people are anxious, defensive, insecure, and emotional. Conversely, those who are emotionally stable are self-confident and relaxed, unlike individuals with low emotional stability, who may feel anxious, depressed, insecure, and fearful. People with these traits are more likely to avoid situations where they might fail and often lack confidence in their social and personal abilities. Neuroticism is often considered a dark

personality trait. There is a negative relationship between neuroticism and entrepreneurial success; however, entrepreneurs need the ability to cope with adversity and take personal responsibility. Entrepreneurship involves risk-taking, which may be less suitable for those high in the neuroticism trait

Table 31 Descriptive statistics of openness to experience personality

The Big Five personality traits were used to assess openness to experience, and respondents answered questions on a scale from strongly disagree to strongly agree. Some questions were reverse-coded and adjusted to read correctly. Based on the respondents' selections, the mean score was 3.7, with a standard deviation of 0.4. This indicates that, on a scale of 1 to 5—where 1 represents strongly disagree and 5 represents strongly agree—the average response of the 250 entrepreneurs suggests that their personalities are more open to experience.

Table 32 Descriptive statistics of conscientiousness personality

Big Five Personality- Conscientiousness (250 Respondents)	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total Respondents	Mean	Standard Deviation
CONS_Q3 - I see myself as someone who does a thorough job.	41.2%	47.2%	8.8%	2.4%	0.4%	100%	4.3	0.8
CONS_Q8R - I see myself as someone who can be somewhat careless.	18.4%	45.6%	19.6%	14.4%	2.0%	100%	2.4	1
CONS_Q13 - I see myself as someone who is a reliable worker.	48.4%	42.0%	8.0%	1.2%	0.4%	100%	4.4	0.7
CONS_Q18R - I see myself as someone who tends to be disorganised.	26.4%	36.0%	17.6%	14.8%	5.2%	100%	2.4	1.2
CONS_Q23R - I see myself as someone who tends to be lazy.	25.6%	38.8%	18.0%	14.0%	3.6%	100%	2.3	1.1
CONS_Q28- I see myself as someone who perseveres until the task is finished.	35.6%	46.0%	12.4%	5.6%	0.4%	100%	4.1	0.9
CONS_Q33- I see myself as someone who does things efficiently.	29.6%	57.6%	9.2%	3.6%	0.0%	100%	4.1	0.7
CONS_Q38- I see myself as someone who makes plans and follows through with them.	26.4%	49.2%	16.4%	6.8%	1.2%	100%	3.9	0.9
CONS_Q43R - I see myself as someone who is easily distracted.	8.0%	35.6%	23.2%	24.4%	8.8%	100%	2.9	1.1
CONSCIENTIOUSNESS: Grand Total							3.4	0.9

On a scale of 1- 5, respondents were asked questions about conscientiousness, with 1 being strongly disagree and 5 being strongly agree. All reverse questions were adjusted to be interpreted accordingly on the reverse scale. The Big Five personality traits were used to assess

conscientiousness, and respondents were asked to rate their agreement on a scale from strongly disagree to strongly agree. Based on the respondent's selection, the mean was 3.4, and the standard deviation was 0.9. This is interpreted as a scale of 1-5, with 1 being strongly disagree and 5 strongly agree; statistically, among the 250 entrepreneurs, the average is 3.7, which is more towards agree that their personality is more *conscientious*.

Table 33 Descriptive statistics of Extraversion personality

Big Five Personality- Extraversion (250 Respondents)	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total Respondents	Mean	Standard Deviation
EXTR_Q1- I see myself as someone who is talkative.	11.6%	29.2%	21.2%	29.2%	8.8%	100%	3.1	1.2
EXTR_Q6R - I see myself as someone who is reserved.	3.2%	21.2%	20.4%	40.8%	14.4%	100%	3.4	1.1
EXTR_Q11- I see myself as someone who is full of energy.	12.0%	32.8%	32.0%	22.0%	1.2%	100%	3.3	1
EXTR_Q16- I see myself as someone who generates a lot of enthusiasm.	14.4%	39.2%	34.4%	11.2%	0.8%	100%	3.6	0.9
EXTR_Q21R - I see myself as someone who tends to be quiet.	5.2%	20.0%	22.8%	32.0%	20.0%	100%	3.4	1.2
EXTR_Q26- I see myself as someone who has an assertive personality.	10.4%	38.8%	24.8%	20.8%	5.2%	100%	3.3	1.1
EXTR_Q31R - I see myself as someone who is sometimes shy, inhibited.	6.4%	20.0%	23.2%	34.4%	16.0%	100%	3.3	1.2
EXTR_Q36- I see myself as someone who is outgoing and sociable.	8.0%	30.8%	29.6%	22.4%	9.2%	100%	3.1	1.1
EXTRAVERSATION: Grand Total							3.3	1.1

The Big Five personality scales were used to assess extraversion, and respondents were asked to rate their agreement on a scale from strongly disagree to strongly agree. Some questions were reverse-coded and adjusted to read correctly. Based on the respondents' selections, the mean was 3.3, and the standard deviation was 0.4. This indicates that, on a scale of 1-5—where 1 is strongly disagree and 5 is strongly agree—the average response of the 250 entrepreneurs leans toward the agree end, suggesting they view their personality as more extroverted.

Table 34 Descriptive statistics of Agreeable personality

Big Five Personality Agreeableness (250 Respondents)	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total Respondents	Mean	Standard Deviation
AGRE_Q2R - I see myself as someone who tends to find fault with others.	12.8%	31.6%	23.6%	27.2%	4.8%	100%	3.0	1.0
AGRE_Q7 - I see myself as someone helpful and unselfish with others.	31.2%	53.6%	12.4%	2.8%	0.0%	100%	4.1	0.7
AGRE_Q12R - I see myself as someone who starts quarrels with others.	49.6%	34.4%	10.4%	4.0%	1.6%	100%	2.0	1.0
AGRE_Q17 - I see myself as someone who has forgiving nature.	19.2%	42.8%	24.4%	11.2%	2.4%	100%	3.7	1.0
AGRE_Q22 - I see myself as someone who is generally trusting.	24.8%	42.4%	18.4%	10.8%	3.6%	100%	3.7	1.1
AGRE_Q27R - I see myself as someone who can be cold and aloof.	18.4%	36.0%	19.6%	23.6%	2.4%	100%	3.0	1.0
AGRE_Q32 - I see myself as someone who is considerate and kind to almost everyone.	30.8%	49.6%	14.8%	4.4%	0.4%	100%	4.1	0.8
AGRE_Q37R - I see myself as someone who is sometimes rude to others.	34.8%	34.0%	16.0%	13.6%	1.6%	100%	2.0	1.0
AGRE_Q42 - I see myself as someone who likes to cooperate with others.	14.4%	55.6%	22.4%	5.6%	2.0%	100%	3.7	0.8
AGREEABLENESS: Grand Total							3.3	0.9

The Big Five personality traits were used to assess agreeableness, and respondents were asked to rate their agreement on a scale from strongly disagree to strongly agree. Some questions were on the reverse of the scales and adjusted to read correctly. Based on the respondents' selections, the mean was 3.3, and the standard deviation was 0.9. This indicates that, on a scale of 1-5, with 1 being strongly disagree and 5 strongly agree, the majority of the 250 entrepreneurs' responses average at 3.3, which leans more towards agreeing that their personality is more agreeable.

Table 35 Descriptive statistics of Neuroticism personality

Big Five Personality- Neuroticism (250 Respondents)	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total Respondents	Mean	Standard Deviation
NEUR_Q4- I see myself as someone who is depressed and blue.	3.2%	18.8%	26.0%	29.2%	22.8%	100%	2.5	1.1
NEUR_Q9R - I see myself as someone who is relaxed, handles stress well.	4.4%	21.2%	24.0%	33.2%	17.2%	100%	3.4	1.1
NEUR_Q14 - I see myself as someone who can be tense.	9.6%	38.0%	20.0%	26.4%	6.0%	100%	3.2	1.1
NEUR_Q19 - I see myself as someone who worries a lot.	16.4%	32.4%	20.0%	21.6%	9.6%	100%	3.2	1.2
NEUR_Q24R - I see myself as someone who is emotionally stable and not easily upset.	2.8%	16.0%	25.2%	37.2%	18.8%	100%	3.5	1.1
NEUR_Q29 - I see myself as someone who can be moody.	6.4%	29.2%	21.2%	31.2%	12.0%	100%	2.9	1.2
NEUR_Q34R - I see myself as someone who remains calm in tense situations.	2.4%	5.6%	20.8%	51.2%	20.0%	100%	3.8	0.9
NEUR_Q39 - I see myself as someone who gets nervous easily.	12.0%	30.0%	22.0%	27.6%	8.4%	100%	3.1	1.2
NEUROTICISM: Grand Total							3.3	1.1

The Big Five personality traits were used to assess *Neuroticism*, and respondents were asked questions on a scale from strongly disagree to strongly agree. Some questions were in the reverse order of the scales; they were adjusted to read correctly. Based on the respondents' selection, the mean was 3.3, and the standard deviation was 0.9. This is interpreted as that on a scale of 1-5, 1 being strongly disagree and 5 being strongly agree, statistically speaking of the 250 entrepreneurs, most of the respondents' average is 3.3, which is more towards agree that their personality is more *neurotic*.

6.6 Descriptive statistics- Narcissism personality

The 250 respondents were asked questions based on the NPI40. The scale consists of 40 items, and the scores are assigned as per the scoring key whereby one among the given two alternatives for each item was assigned one point, indicating the presence of narcissism. In Raskin & Terry (1988) is widely used to calculate NPI and is based on the definition of narcissistic personality disorder but is not a diagnostic tool for NPD – narcissistic personality disorder.

Table 36 Descriptive statistics of the Narcissism Personality Inventory (NPI)

Narcissism Personality (250 Respondents)	Respondents were asked to choose the one closer to their own feeling	Non-Narc vs. Narc Key	No. of Respondents	Column Valid N %	Column Total N %	Mean	Standard Deviation
NARC_Q1 AUTHORITATIVENESS - Choose the one closer to your feeling	(A) I have a natural talent for influencing people. (B) I am not good at influencing people. Total	(A) <u>NARC</u> (B) NON-NARC	166 84 250	66.4% 33.6% 100%	1.3	0.5	
NARC_Q2 EXHIBITIONISM - Choose the one closer to your feeling	(A) Modesty doesn't become me. (B) I am essentially a modest person. Total	(A) <u>NARC</u> (B) NON-NARC	37 213 250	14.8% 85.2% 100%	1.9	0.4	
	(A) I would do almost anything on a dare.	(A) <u>NARC</u>	49	19.6%			

NARC_Q3 EXHIBITIONISM - Choose the one closer to your feeling	(B) I prefer to blend in with the crowd. Total	(B) NON-NARC	201 250	80.4% 100%	1.8	0.4
	(A) When people compliment me, I sometimes get embarrassed. (B) I know that I am good because everybody keeps telling me so. Total	(A) NON-NARC (B) NARC	202 48	80.8% 19.2%	 100%	 1.2
NARC_Q4 SUPERIORITY - Choose the one closer to your feeling	(A) The thought of ruling the world frightens the hell out of me. (B) If I ruled the world, it would be a better place. Total	(A) NON-NARC (B) NARC	133 117	53.2% 46.8%	 100%	 1.5
	(A) I can usually talk my way out of anything. (B) I try to accept the consequences of my behaviour. Total	(A) NARC (B) NON-NARC	93 157	37.2% 62.8%	 100%	 1.6
NARC_Q5 ENTITLEMENT - Choose the one closer to your own feeling	(A) I prefer to blend in with the crowd. (B) I like to be the centre of attention. Total	(A) NON-NARC (B) NARC	204 46	81.6% 18.4%	 100%	 1.2
	(A) I will be a success. (B) I am not too concerned about success. Total	(A) NARC (B) NON-NARC	155 95	62.0% 38.0%	 100%	 1.4
NARC_Q6 EXPLOITIVENESS - Choose the one closer to your own feeling	(A) I am no better or worse than most people. (B) I think I am a special person. Total	(A) NON-NARC (B) NARC	176 74	70.4% 29.6%	 100%	 1.3
	(A) I am not sure if I would make a good leader. (B) I see myself as a good leader. Total	(A) NON-NARC (B) NARC	107 143	42.8% 57.2%	 100%	 1.6
NARC_Q7 EXHIBITIONISM - Choose the one closer to your own feeling	(A) I am assertive. (B) I wish I were more assertive. Total	(A) NARC (B) NON-NARC	130 120	52.0% 48.0%	 100%	 1.5
	(A) I like to have authority over other people. (B) I don't mind following orders.	(A) NARC (B) NON-NARC	80 170	32.0% 68.0%		
NARC_Q8 AUTHORITATIVENESS - Choose the one closer to your own feeling						
NARC_Q9 SUPERIORITY - Choose the one closer to your own feeling						
NARC_Q10 AUTHORITATIVENESS - Choose the one closer to your own feeling						
NARC_Q11 AUTHORITATIVENESS - Choose the one closer to your own feeling						
NARC_Q12 AUTHORITATIVENESS - Choose the one closer to your own feeling						

	Total		250		100%	1.7	0.5
NARC_Q13 EXPLOITIVENESS - Choose the one closer to your own feeling	(A) I find it easy to manipulate people. (B) I don't like it when I find myself manipulating people Total	(A) <u>NARC</u> (B) NON-NARC	64 186 250	25.6% 74.4% 100%		1.7	0.4
NARC_Q14 ENTITLEMENT - Choose the one closer to your own feeling	(A) I insist upon getting the respect that is due to me. (B) I usually get the respect that I deserve. Total	(A) <u>NARC</u> (B) NON-NARC	43 207 250	17.2% 82.8% 100%		1.8	0.4
NARC_Q15 VANITY - Choose the one closer to your own feeling	(A) I don't particularly like to show off my body. (B) I like to show off my body. Total	(A) NON-NARC (B) <u>NARC</u>	224 26 250	89.6% 10.4% 100%		1.1	0.3
NARC_Q16 EXPLOITIVENESS - Choose the one closer to your own feeling	(A) I can read people like a book. (B) People are sometimes hard to understand Total	(A) <u>NARC</u> (B) NON-NARC	148 102 250	59.2% 40.8% 100%		1.4	0.5
NARC_Q17 SELF SUFFICIENCY - Choose the one closer to your own feeling	(A) If I feel competent, I am willing to take responsibility for making decisions. (B) I like to take responsibility for making decisions. Total	(A) NON-NARC (B) <u>NARC</u>	174 76 250	69.6% 30.4% 100%		1.3	0.5
NARC_Q18 ENTITLEMENT - Choose the one closer to your own feeling	(A) I just want to be reasonably happy. (B) I want to amount to something in the eyes of the world Total	(A) NON-NARC (B) <u>NARC</u>	204 46 250	81.6% 18.4% 100%		1.2	0.4
NARC_Q19 VANITY - Choose the one closer to your own feeling	(A) My body is nothing special. (B) I like to look at my body. Total	(A) NON-NARC (B) <u>NARC</u>	190 60 250	76.0% 24.0% 100%		1.2	0.4
NARC_Q20 EXHIBITIONISM - Choose the one closer to your own feeling	(A) I try not to be a show-off. (B) I will usually show off if I get the chance. Total	(A) NON-NARC (B) <u>NARC</u>	220 30 250	88.0% 12.0% 100%		1.1	0.3
NARC_Q21 SELF SUFFICIENCY - Choose the one closer to your own feeling	(A) I always know what I am doing. (B) Sometimes I am not sure of what I am doing. Total	(A) <u>NARC</u> (B) NON-NARC	87 163 250	34.8% 65.2% 100%		1.7	0.5
NARC_Q22 SELF SUFFICIENCY - Choose the one closer to your own feeling	(A) I sometimes depend on people to get things done. (B) I rarely depend on anyone else to get things done. Total (A) Sometimes, I tell good stories.	(A) NON-NARC (B) <u>NARC</u> A. NON-NARC	105 145 250 204	42.0% 58.0% 100% 81.6%		1.6	0.5

NARC Q23 EXPLOITIVENESS - Choose the one closer to your own feeling NARC Q24 ENTITLEMENT - Choose the one closer to your own feeling NARC Q25 ENTITLEMENT - Choose the one closer to your own feeling NARC_Q26 SUPERIORITY - Choose the one closer to your own feeling NARC_Q27 ENTITLEMENT - Choose the one closer to your own feeling NARC_Q28 EXHIBITIONISM - Choose the one closer to your own feeling NARC_Q29 VANITY - Choose the one closer to your own feeling NARC Q30 EXHIBITIONISM - Choose the one closer to your own feeling NARC_Q31 SELF SUFFICIENCY - Choose the one closer to your own feeling NARC_Q32 AUTHORITATIVENESS - Choose the one closer to your own feeling NARC_Q33 AUTHORITATIVENESS - Choose the one closer to your own feeling	(B) Everybody likes to hear my stories. Total	(B) <u>NARC</u>	46	18.4%	100%	1.2	0.4	
		(A) <u>NARC</u>	68	27.2%				
	(A) I expect a great deal from other people. (B) I like to do things for other people. Total	(B) NON-NARC	182	72.8%	100%	1.7	0.4	
		(A) <u>NARC</u>	51	20.4%				
	(A) I will never be satisfied until I get all that I deserve. (B) I take my satisfaction as they come. Total	(B) NON-NARC	199	79.6%	100%	1.8	0.4	
		(A) <u>NARC</u>	250	56.4%				
	(A) Compliments embarrass me. (B) I like to be complimented. Total	(B) <u>NARC</u>	109	43.6%	100%	1.4	0.5	
		(A) <u>NARC</u>	141	26.0%				
	(A) I have a strong will to power. (B) Power for its own sake does not interest me. Total	(B) NON-NARC	185	74.0%	100%	1.7	0.4	
		(A) <u>NARC</u>	65	26.0%				
	(A) I don't care about new fads and fashions. (B) I like to start new fads and fashion. Total	(B) <u>NARC</u>	42	16.8%	100%	1.2	0.4	
		(A) <u>NARC</u>	208	83.2%				
	(A) I like to look at myself in the mirror. (B) I am not particularly interested in looking at myself in the mirror. Total	(B) NON-NARC	250	73.2%	100%	1.7	0.4	
		(A) <u>NARC</u>	67	26.8%				
	(A) I really like to be the centre of attention. (B) It makes me uncomfortable to be the centre of attention. Total	(B) NON-NARC	183	49	19.6%	100%	1.8	0.4
		(A) <u>NARC</u>	201	80.4%				
	(A) I can live my life in any way I want to. (B) People can't always live their lives in terms of what they want. Total	(B) NON-NARC	250	128	51.2%	100%	1.5	0.5
		(A) <u>NARC</u>	122	48.8%				
	(A) Being an authority does not mean that much to me. (B) People always seem to recognize my authority. Total	(B) <u>NARC</u>	73	177	70.8%	100%	1.3	0.5
		(A) <u>NARC</u>	250	84	29.2%			
	(A) I would prefer to be a leader. (B) It makes little difference to me whether I am a leader or not.	(B) NON-NARC	166	84	33.6%	100%	1.3	0.5
		(B) <u>NARC</u>	177	166	66.4%			

	Total		250		100%	1.7	0.5
NARC_Q34 SELF SUFFICIENCY - Choose the one closer to your own feeling	(A) I am going to be a great person. (B) I hope I am going to be successful Total	(A) <u>NARC</u> B. NON-NARC	100 150 250	40.0% 60.0% 100%	1.6	0.5	
NARC_Q35 EXPLOITIVENESS - Choose the one closer to your own feeling	(A) People sometimes believe what I tell them. (B) I can make anybody believe anything I want them to. Total	(A) NON-NARC (B) <u>NARC</u>	182 68 250	72.8% 27.2% 100%	1.3	0.4	
NARC_Q36 AUTHORITATIVENESS - Choose the one closer to your own feeling	(A) I am a born leader. (B) Leadership is a quality that takes a long time to develop. Total	(A) <u>NARC</u> (B) NON-NARC	54 196 250	21.6% 78.4% 100%	1.8	0.4	
NARC_Q37 SUPERIORITY - Choose the one closer to your own feeling	(A) I wish somebody would someday write my biography. (B) I don't like people to pry into my life for any reason. Total	(A) <u>NARC</u> (B) NON-NARC	42 208 250	16.8% 83.2% 100%	1.8	0.4	
NARC_Q38 EXHIBITIONISM - Choose the one closer to your own feeling	(A) I get upset when people don't notice how I look when I go out in public. (B) I don't mind blending into the crowd when I get out in public. Total	(A) <u>NARC</u> (B) NON-NARC	20 230 250	8.0% 92.0% 100%	1.9	0.3	
NARC_Q39 SELF SUFFICIENCY - Choose the one closer to your own feeling	(A) I am more capable than other people. (B) There is a lot that I can learn from other people. Total	(A) <u>NARC</u> (B) NON-NARC	86 164 250	34.4% 65.6% 100%	1.7	0.5	
NARC_Q40 SUPERIORITY - Choose the one closer to your own feeling	(A) I am much like everybody else. (B) I am an extraordinary person. Total	(A) NON-NARC (B) <u>NARC</u>	177 73 250	70.8% 29.2% 100%	1.3	0.5	
NARCISSISM: Grand Total				10,000			

Respondents were asked questions based on the Narcissistic Personality inventory (NPI40), which was used to determine their narcissistic personality scale. Respondents were required to choose between two options, with one option being the narcissistic response and the other being non-narcissistic. The table was coded in SPSS to reflect the narcissistic responses. Respondents were asked to select between two responses: A and B. One of these respondents was considered the narcissistic response, and the non-narcissistic response. For each of the following where respondents answered 'A', they were awarded **one point (SPSS CODING '1')**: 1, 2, 3, 6, 8, 11, 12, 13, 14, 16, 21, 24, 25, 27, 29, 30, 31, 33, 34, 36, 37, 38, 39. For each of the following where you answered 'B', give yourself one point: (**SPSS CODING '2'**): 4, 5, 7, 9, 10, 15, 17, 18, 19, 20, 22, 23, 26, 28, 32, 35, 40. This was reversed in SPSS to compute the variable NPI. Raskin and Terry (1988) developed the Narcissistic Personality Inventory and revised the NPI40 Scale (Balaji & Balasundaram, 2015). There are various debates in the literature between clinical and social psychological theories. The clinical theory states that there is no category of 'normal' and 'narcissist' (Foster & Campbell, 2007) While the psychological theory states that there is a category of narcissism of those who score 10 to 15, which is generally found to be the normal population, and NPI 40 scores found between 15 and 20 are said to be borderline. Those respondents who have NPI 40, equal to 20 and excess are considered highly narcissistic personalities. The research uses the clinical approach and theory, where there were no cut-offs for normal and high narcissists, which is also addressed in the limitations of the thesis. The NPI measures narcissism as a continuous variable, and there is no specific cut-off score for which a person would be considered a clinical narcissist.

6.7 Descriptive Statistics- Financing Decisions

The 250 respondents were asked questions about financing decisions in their SMEs. This section will summarise the statistical results of the financing decisions of the 250 UK entrepreneurs.

Table 37 Descriptive Statistics of Problems Experienced by UK Entrepreneurs

250 Respondents		Count 'No. of Respondents	Table Total N %
STARTUP_PROBLEMS_EXPERIENCE- Which of the following	Business planning	11	4.4%
	Finding premises	7	2.8%
	Cost of premises	8	3.2%

issues, if any, caused problems for your business at start-up?	Finding sources of finance	34	13.6%
	Cost of finance	17	6.8%
	Finding customers	81	32.4%
	Availability of skilled workers	4	1.6%
	Employee costs/wage bills	5	2.0%
	Coping with regulations/red tape	13	5.2%
	Competition from other firms	14	5.6%
	Lack of advice/support	18	7.2%
	No problems/none of these issues	32	12.8%
	Other	5	2.0%
	Missing %	1	0.4%
	Total	250	100.0%

The entrepreneurs were asked about their main business problems, and, based on their responses, 32.4% reported that one of their fundamental issues was finding customers. A further 13.6% replied that they were struggling to find sources of finance, 12.8% stated they did not face any of those problems, and 7.2% encountered challenges due to a lack of advice and support. Additionally, 6.8% identified the cost of finance as a significant challenge, and 5.6% reported problems with competition from other firms. A further 5.2% were coping with red flags and regulations. Respondents cited 4.4% for business planning, 3.2% for the cost of premises, 2.8% for finding premises, and 1.6% for challenges in finding skilled workers.

Table 38 Descriptive statistics of financing preference with equity or debt

250 Respondents		Count 'No. of Respondents	Table Total N %
PREFERRED SOURCE FUNDIN F_DEBT_OR_EQUITY- What is your preferred source of funding	Debt	94	37.6%
	Equity	155	62.0%
	Missing %	1	0.4%
	Total	250	100.0%

Respondents were further asked whether they preferred debt or equity: 37.6% preferred debt and 62.0% preferred equity. One respondent (0.1%) did not answer the question.

Table 39 Descriptive statistics of external financing decision choices

External Financing Decision (250 Respondents)	Respondents were asked whether they used the following Type of funding	No. of Respondents	Table Total N%	Table Valid N%	Mean	Standard Deviation
EXTERNAL FUNDING_MORTGAGE HOME- What sources of finance were used to establish the business? You may select more than one option - Mortgage on the home	Yes No Total	5 245 250	2.0% 98.0%	100.0%	2.0	0.1
EXTERNAL FUNDING_CREDIT CARD - What sources of finance were used to establish the business? You may select more than one option - Credit card	Yes No Total	37 213 250	14.8% 85.2%	100.0%	1.9	0.4
EXTERNAL FUNDING_CHARGEBACK - What sources of finance were used to establish the business? You may select more than one option - Charge card	Yes No Total	5 245 250	2.0% 98.0%	100.0%	2	0.1
EXTERNAL FUNDING_LOANS BANKS - What sources of finance were used to establish the business? You may select more than one option - A loan from a bank	Yes No Total	34 216 250	13.6% 86.4%	100.0%	1.9	0.3
EXTERNAL_FUNDING_ISSUING SHARES BUSINESS_ANGELS -What sources of finance were used to establish the business? You may select more than one option - Issuing shares to business angels	Yes No Total	1 249 250	0.4% 99.6%	100.0%	2	0.1
EXTERNAL_FUNDING_ISSUING SHARES VENTURE_CAPITALIST - What sources of finance were used to establish the business? You may select more than one option - Issuing shares to venture Capitalist	Yes No Total	3 247 250	1.2% 98.8%	100.0%	2	0.1
EXTERNAL_FUNDING_ISSUING SHARES OTHER_INVESTORS-What sources of finance were used to establish the business? You may select more than one option - Issuing shares to other investors	Yes No Total	2 248 250	0.8% 99.2%	100.0%	2	0.1
EXTERNAL_FUNDING_GRANT_SUBSIDIZED - What sources of finance were used to establish the business? You may select more than one option - Grant/subsidised 1	Yes No Total	20 230 250	8.0% 92.0%	100.0%	1.9	0.3

Respondents were asked about the external funding used to establish the business. 14.8% reported using credit cards, 13.6% decided to use bank loans to develop the business, 8.0% reported using subsidised grants, 2.0% chose to use their home mortgage and chargeback, 1.2% issued shares to venture capitalists, 0.8% used equity by issuing shares to other investors to fund the business, and 0.4% issued shares to business angels.

Table 40 Descriptive statistics of internal financing decision choices

Internal Financing Decision (250 Respondents)	Respondents were asked whether they used the following Type of funding	No. of Respondents	Table Total N%	Table Valid N%	Mean	Standard Deviation
INTERNAL FUNDING _PERSONAL SAVINGS - What sources of finance were used to establish the business? You may select more than one option - Personal savings	Yes No Total	214 35 249	85.6% 14.0%	100%	1.1	0.3
INTERNAL FUNDING _GIFTS FRIEND_FAMILY- What sources of finance were used to establish the business? You may select more than one option - Gift from friends, family	Yes No Total	33 217 250	13.2% 86.8%	100%	1.9	0.3
INTERNAL FUNDING _LOANS FRIEND_FAMILY - What sources of finance were used to establish the business? You may select more than one option - Loan from friends & Family	Yes No Total	27 223 250	10.8% 89.2%	100%	1.9	0.3
INTERNAL ISSUING _SHARES FRIEND_FAMILY - What sources of finance were used to establish the business? You may select more than one option - Issuing shares to friends & Family	Yes No Total	8 242 250	3.2% 96.8%	100%	2	0.2

Respondents were also asked whether they used internal funding to establish the business. 85.6% agreed that they used funding such as personal savings, and 13.25% stated they received internal funding from family and friends. A further 10.8% of respondents noted receiving loans from family and friends, and 3.2% issued shares to family and friends. From a review of funding received from the 250 entrepreneurs, it is noted that several respondents selected personal funding, savings (85.6%), credit cards (14.8%), and gifts from friends (13.2%). It can be observed that a significant number of respondents reported using internal funding as part of their finances when establishing their business. This supports the theory that SME entrepreneurs may adopt the pecking order theory, whereby internal funding is accessed first to support the growth of the venture. After that, they seek external funding.

Table 41 Descriptive statistics of UK entrepreneurs' knowledge of financing decision choices

Other Response to Financing Decision (250 Respondents)	Respondents were asked whether they used the following Type of funding	No. of Respondents	Table Total N %	Table Valid N %	Mean	Standard Deviation
NO_FUNDING_RECEIVED - What sources of finance were used to establish the business? You may select more than one option - No funding	Yes	20	8.0%			
	No	230	92.0%			
	Total	250		100%	1.9	0.3
DONT_KNOW - What sources of finance were used to establish the business? You may select more than one option - Don't Know	Yes	0	0.0%			
	No	250	100.0%			
	Total	250		100%	2.00	0.00
OTHER - What sources of finance were used to establish the business? You may select more than one option - Other	Yes	2	0.8%			
	No	248	99.2%			
	Total	250		100%	2.00	0.10

A few respondents were unsure of what funding they received; 8% stated that they received no funding to establish their business. Two (2) (0.8%) respondents used other sources. These respondents are likely those who had acquired their business through gifting. None of the respondents said they did not know, suggesting they were very aware of the financing used to establish their businesses.

Table 42 Descriptive statistics of financing decisions choices over the last 3 years

Funding Received over the last three (3) years (250 Respondents)	Respondents were asked whether they used the following Type of funding	No. of Respondents	Table Total N %	Mean	Standard Deviation
FUNDING_FROM_CURRENT_ACCOUNT - which of the following finance forms have you used over the last 3 years for business purposes? You may select more than one.	Yes	207	82.8%		
	No	43	17.2%		
	Total	250	100.0%	1.2	0.4
FUNDING_FROM_OVERDRAFTS - which of the following finance forms have you used over the last 3 years for business purposes? You may select more than one.	Yes	62	24.8%		
	No	188	75.2%		
	Total	250	100.0%	1.8	0.4
FUNDING FROM DEPOSIT ACCOUNTS- which of the following finance forms have you used over the last 3 years for business purposes? You may select more than one.	Yes	33	13.2%		
	No	217	86.8%		

	Total	250	100.0%	1.9	0.3
FUNDING_FROM_GRANTS - which of the following forms of finance have you used over the last 3 years for business purposes? You may select more than one.	Yes No Total	31 219 250	12.4% 87.6% 100.0%	1.9	0.3
FUNDING_FROM_COMMERCIAL_LOAN_MORTGAGE - which of the following forms of finance have you used over the last 3 years for business purposes? You may select more than one	Yes No Total	29 221 250	11.6% 88.4% 100.0%	1.9	0.3
FUNDING_FROM_LEASING_OR_HIRE_PURCHASING - which of the following forms of finance you have used over the last 3 years for business purposes? You may select more than one	Yes No Total	18 232 250	7.2% 92.8% 100.0%	1.9	0.3
FUNDING_FROM_ASSET_BASED_FINANCING - which of the following forms of finance you have used over the last 3 years for business purposes? You may select more than one	Yes No Total	2 248 250	0.8% 99.2% 100.0%	2.0	0.1
FUNDING_FROM_CREDIT_CARD - which of the following forms of finance you have used over the last 3 years for business purposes? You may select more than one	Yes No Total	65 185 250	26.0% 74.0% 100.0%	1.7	0.4
FUNDING_FROM_ISSUING SHARES - which of the following forms of finance you have used over the last 3 years for business purposes? You may select more than one	Yes No Total	5 245 250	2.0% 98.0% 100.0%	2.0	0.1
FUNDING_FROM_OTHER - which of the following forms of finance you have used over the last 3 years for business purposes? You may select more than one	Yes No Total	4 246 250	1.6% 98.4% 100.0%	2.0	0.1
FUNDING FROM NONE - which of the following forms of finance you have used over the last 3 years for business purposes? You may select more than one	Yes No Total	18 232 250	7.2% 92.8% 100.0%	1.9	0.3

The 250 respondents were asked whether they had funding over the last three (3) years and what source they accessed. Based on the responses, 82.8% agreed that they used funds from their current account to fund the business over the last 3 years. 26.0% used credit cards to fund the business operations. 24.8% agreed to access overdraft to support the business finances. A further 13.2% decided to use grants in their business over the last three years, and an additional 11.6% used commercial loans. Overall, many SME entrepreneurs have funded their businesses through internal funding over the past 3 years. Therefore, the theory is found to be accurate and in alignment with the pecking order theory.

Table 43 Descriptive statistics of the type of external funding received.

External funding received (250 Respondents)	Respondents were asked whether they used the following Type of funding	No. of Respondents	Table Total N%	Table Valid N%	Mean	Standard Deviation
EXTERNAL_FUNDING_GRANT_FINANCING - Specify whether you have received funding from one of the following external sources?	Yes	31	12.4%			
	No	219	87.6%			
	Total	250		100%	1.9	0.3
EXTERNAL_FUNDING_COMMERCIAL_LOAN_MORGAGES- Specify whether you have received funding from one of the following external sources?	Yes	35	14.0%			
	No	215	86.0%			
	Total	250		100%	1.9	0.3
EXTERNAL_FUNDING_LEASING- Specify whether you have received funding from one of the following external sources?	Yes	15	6.0%			
	No	235	94.0%			
	Total	250		100%	1.9	0.2
EXTERNAL_FUNDING_HIRE_PURCHASE - Specify whether you have received funding from one of the following external sources?	Yes	13	5.2%			
	No	237	94.8%			
	Total	250		100%	1.9	0.2
EXTERNAL_FUNDING_ASSET_BASED_FINANCING - Specify whether you have received funding from one of the following external sources?	Yes	2	0.8%			
	No	248	99.2%			
	Total	250		100%	2.0	0.1
EXTERNAL_FUNDING_ISSUING SHARES - Specify whether you have received funding from one of the following external sources?	Yes	8	3.2%			
	No	242	96.8%			
	Total	250		100%	2.0	0.2
EXTERNAL_FUNDING_OTHER - Specify whether you have received funding from one of the following external sources?	Yes	3	1.2%			
	No	247	98.8%			
	Total	250		100%	2.0	0.1
EXTERNAL_FUNDING_NONE - Specify whether you have received funding from one of the following external sources?	Yes	168	67.2%			
	No	82	32.8%			
	Total	250		100%	1.3	0.5

Respondents were asked to answer yes or no regarding external funding. 14% said yes to external financing of commercial loans, and 12.4% received grant funding. 6% agreed to use a lease to fund their venture, 5.2% opted for hire purchase for their operations, and 3.2% agreed to issue shares. 67.2% declined external funding for their venture, supporting the theory.

Table 44 Descriptive statistics of whether UK entrepreneurs successfully obtained external funding on their first attempt.

Successful at external funding at first attempt (250 Respondents)	Respondents were asked to select the most suitable response	No. of Respondents	Table Total N %
SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt at acquiring financing?	Yes	80	32.00%
	No	80	32.00%
	Don't know	89	35.60%
	No Response	1	0.40%
	Total	250	100.00%

The 250 respondents were asked whether they had secured external funding for their business. 32% replied that they were successful, 32% stated that they were not, 35.60% indicated that they did not know whether they were, and 0.40% did not answer the question.

Table 45 : Descriptive statistics of the value of external funding received by UK entrepreneurs.

Value of external funding received (250 Respondents)	Respondents were asked to select a value range	No. of Respondents	Table Total N %
VALUE_OF_EXTERNAL_FUNDING_RECEIVED - How much external funding did you acquire?	Less than £5,000	72	28.8%
	£5,000 - £9,999	23	9.2%
	£10,000 - £49,999	15	6.0%
	£50,000 - £99,999	14	5.6%
	£100,000 - £499,999	8	3.2%
	£500,000 - £999,999	1	0.4%
	£1m+	1	0.4%
	No Response	1	0.4%
	Don't Know	60	24.0%
	Other	55	22.0%
		Total	250
			100.0%

The 250 UK entrepreneurs were asked what value of external funding their venture received. 28.8% reported receiving less than £5,000. In contrast, a further 9.25% received £5,000 to £9,000, 6.0% received external funding between £10,000 to £49,999, and an additional 5.6% received funding between £50,000 to £99,999, and 3.2% received funding of £100,000 to 499,999, and one (1) respondent (0.40%) receive funding £500,000 to £999,999, further entrepreneur received funding above £1,000,000. 24% of respondents, sixty (60) UK entrepreneurs, stated that they did not know the amount of external funding received, and 22% selected other amounts. One (1) respondent did not answer the question.

Table 46 Descriptive statistics of whether UK entrepreneurs found the external funding decision difficult.

External funding difficulty (250 Respondents)	Respondents were asked whether they found external funding challenging to obtain.	Count	Table Total N %
EXTERNAL_FUNDING_DIFFICULT_YES_NO - Did you consider external funding decisions a complicated process?	Yes	61	24.4%
	No	117	46.8%
	Don't know	71	28.4%
	No Response	1	0.4%
	Total	250	100.0%

The entrepreneurs were asked whether they found the process of external funding difficult. In response, 61 (24.4%) stated that they found it difficult, 117 (46.8%) stated that they did not find it difficult, and 71 (28.4%) indicated that they did not know whether the process was complicated.

Table 47 Descriptive statistics of whether UK entrepreneurs prefer internal or external funding decisions.

Funding Preference (250 Respondents)	Respondents were asked what their funding preferences were	Count	Table Total N %
FUNDING_PREFERENCE - Which do you prefer, internal or external funding?	Internal sources of funding, personal funds, family, and friends	209	83.6%
	External sources of funding, bank loans, equity from investors	40	16.0%
	No Response	1	0.4%
	Total	250	100.0%

Based on the responses of 250 entrepreneurs across the UK, 209 respondents, approximately 83.6%, prefer internal funding, such as personal funds, family, and friends, in comparison to 40 respondents, approximately 16.0%, who prefer external funding, such as bank loans and equity from investors. One (1) respondent did not respond to the question.

6.8 Inferential Statistics Introduction

This section will discuss the statistical results of the thesis study and analyse them, considering the statistical inferences. The previous sections present the descriptive statistics of the study. The statistical software used to conduct the analysis is SPSS, with correlations and simple linear regression for hypotheses 1 (H1) to 5 (H5), multiple regression for hypothesis 6 (H6), and further analysis of the financial decision choices of UK entrepreneurs will be conducted using the linear probability model and binary logistic regression to analyse hypotheses 7 (H7) to 10 (H10).

6.9 Pearson Correlation of Big Five personality and narcissism

Using SPSS Statistics to analyse Pearson correlation, it was relevant to assess and analyse the association between the variables from the Big Five personality traits: openness to experience, contentiousness, extraversion, agreeableness and neuroticism, along with evaluating narcissism. Pearson's correlation coefficient is a statistical measure of the strength and direction of the relationship between two variables. Pearson measures the similarity or correlation between two data objects by comparing their attributes and producing a score ranging from -1 to +1. A high score indicates a strong association, while a near-zero score indicates a substantial similarity.

Pearson's correlation is considered the most effective method for assessing the association between variables and is ideal for analysing the Big Five variables and narcissism. Correlations and simple linear regression are two ways of exploring the potential linear relationship between two variables. These two methods are often used interchangeably.

Table 48 Correlation analysis of the Big Five personality and narcissism

		Correlation Statistic Analysis					
		OPENNESS TO EXPERIENCE	CONSCIENTIOUSNESS	EXTRAVERSION	AGREEABLENESS	NEUROTICISM	NARCISSISM
OPENNESS TO EXPERIENCE	Pearson Correlation	1	.205**	.380**	.192**	0.119	.314**
	Sig. (2-tailed)		0.001	<0.001	0.002	0.059	<0.001
	N	250	250	250	250	250	250
CONSCIENTIOUSNESS	Pearson Correlation	.205**	1	.239**	.373**	.366**	0.065
	Sig. (2-tailed)	0.001		<0.001	<0.001	<0.001	0.309
	N	250	250	250	250	250	250
EXTRAVERSION	Pearson Correlation	.380**	.239**	1	.409**	.224**	.314**
	Sig. (2-tailed)	<0.001	<0.001		<0.001	<0.001	<0.001
	N	250	250	250	250	250	250
AGREEABLENESS	Pearson Correlation	.192**	.373**	.409**	1	.345**	.157*
	Sig. (2-tailed)	0.002	<0.001	<0.001		<0.001	0.013
	N	250	250	250	250	250	250
NEUROTICISM	Pearson Correlation	0.119	.366**	.224**	.345**	1	-0.075
	Sig. (2-tailed)	0.059	<0.001	<0.001	<0.001		0.236

	N	250	250	250	250	250	250
NARCISSISM	Pearson Correlation	.314**	0.065	.314**	.157*	-0.075	1
	Sig. (2-tailed)	<0.001	0.309	<0.001	0.013	0.236	
	N	250	250	250	250	250	250
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

The correlation analysis revealed several significant relationships among the personality traits. Openness to Experience showed moderate positive correlations with Extraversion ($r = .380$, $p < .001$) and Narcissism ($r = .314$, $p < .001$), and smaller but significant associations with Conscientiousness ($r = .205$, $p = .001$) and Agreeableness ($r = .192$, $p = .002$). At the same time, its relationship with Neuroticism was not significant. Conscientiousness was positively and significantly related to Extraversion ($r = .239$, $p < .001$), Agreeableness ($r = .373$, $p < .001$), and Neuroticism ($r = .366$, $p < .001$), but showed no significant association with Narcissism. Extraversion demonstrated significant positive correlations with all traits, including Agreeableness ($r = .409$, $p < .001$), Neuroticism ($r = .224$, $p < .001$), and Narcissism ($r = .314$, $p < .001$). Agreeableness was also positively related to Neuroticism ($r = .345$, $p < .001$) and showed a weak but significant correlation with Narcissism ($r = .157$, $p = .013$). Neuroticism did not show a significant relationship with Narcissism. Overall, the findings suggest generally positive interrelationships among the Big Five traits, while Narcissism was selectively associated with Openness, Extraversion, and Agreeableness.

6.10 Analysis of Hypothesis 1(H_1)

Hypothesis 1 (H_1) will be analysed using the simple linear regression below, which looks at the association between narcissism and Openness to experience among UK entrepreneurs. The following proposed null and alternative hypotheses:

- **H_{01} :** There is no significant association between narcissism and openness to experience amongst UK entrepreneurs.
- **H_{11} :** There is a significant association between narcissism and openness to experience amongst UK entrepreneurs.

$$y = a + bx$$

$$y = \beta_0 + \beta_1 x + \varepsilon$$

Y: is the dependent variable; Narcissism

X: is the independent variable; Openness to experience

$$Narc = a + bOpen$$

$$Narc = \beta_0 + \beta_1 Open + \varepsilon$$

Narc = Narcissism,
Open = Openness to Experience

Table 49 Summary of simple linear regression of narcissism and openness to experience amongst UK entrepreneurs.

Narcissism and openness to experience amongst UK entrepreneurs.								
N	Model	B	T	Sig.	ANOVA A (Sig.)	R	R ²	F (df)
250	(Constant)	31.747	7.964	<0.001	<0.001 ^b	0.314 ^a	0.099	27.103 (1,248)
	Openness to Experience	0.554	5.206	<0.001				
a. <i>Dependent Variable: Narcissism amongst UK entrepreneurs</i> b. <i>Predictor/ Independent Variable: Openness to Experience</i>								

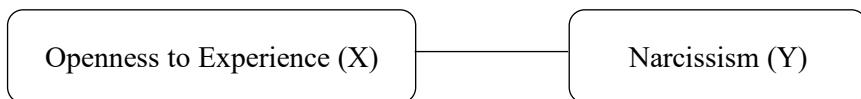
Source: SPSS Survey Results 2024, appendix F,

Table 51 presents the model summary, coefficients, and ANOVA results for the simple linear regression analysis of narcissism and openness to experience among UK entrepreneurs. The analysis tested the hypothesis that openness to experience would significantly affect narcissism among UK entrepreneurs. The outcome reveals that $r = 0.314$ (31.4%) indicates a weak correlation between narcissism and openness to experience among UK entrepreneurs. By implication, as openness to experience increases, narcissism among UK entrepreneurs will also increase by 31.4%. Also, $R^2 = 0.099$ (9.9%) shows that openness to experience can account for

variation in narcissism among UK entrepreneurs. In comparison, the balance of 90.1% reflects changes not accounted for by other variables captured in this study.

The simple linear regression operationalised equation is expressed as:

$$Narc = \beta_0 + \beta_1 Open + \epsilon$$



Based on the resulting output, this will now be:

$$Narc = 31.747 + 0.554 Open \text{ ----- Model Eq. One}$$

Where $Narc$ - Narcissism

$Open$ – Openness to experience amongst UK entrepreneurs.

The linear model equation reveals that, when openness to experience is held constant at zero, narcissism amongst UK entrepreneurs would be 31.747. This suggests that when openness to experience increases by 1 unit, narcissism would be positively affected by a corresponding increase of 0.554 units at $t = 5.206$. Hence, Openness to Experience ($\beta = 0.554$, $t = 5.206$, $p = <0.001 < 0.05$) is a positive determinant of Narcissism amongst UK entrepreneurs, as the output reveals statistically significant influence with a p-value less than 0.05. Based on the outcomes; the *Null (H₀₁) Rejected* and the *Alternative hypothesis (H₁₁) supported*. There is a significant positive association between narcissism and openness to experience amongst UK entrepreneurs.

6.11 Findings of Hypothesis 1 (H₁)

The results of the simple linear regression indicate that the relationship between narcissism and openness to experience is significant. The hypothesis examined the relationship between narcissism and openness to experience, with narcissism as the dependent variable and openness to experience as the independent variable. The results showed a significant outcome ($\beta = 0.554$, $t = 5.206$, $p < 0.001 < 0.05$), indicating that narcissism is a positive determinant of narcissism amongst UK entrepreneurs. When openness to experience is held constant, narcissism increases by 31.7, when openness to experience increases by one unit. When openness to experience

increases by one unit, narcissism increases by 0.554 at $t = 5.206$. The alternative hypothesis (H_{11}) was supported; there is a significant association between narcissism and openness to experience amongst UK entrepreneurs. The findings from the simple linear regression support the conceptual theories of narcissism and openness to experience, as well as the Big Five theory. The literature has pointed to a positive correlation between narcissism and openness to experience. These personality traits have been linked to creativity and intellect and represent the tendency to engage with abstract information. Research has shown that narcissists emphasise their cognitive abilities, and there is a positive association between narcissism and intellect (Zajenkowski & Szymaniak, 2021). The findings relate to the existing literature on business students, which shows that narcissism is likely to be associated with high intellect, primarily due to their inflated self-image. Intellect is closely related to openness to experience, and this also influences the need for entrepreneurs to be creative and innovative; the literature also reports a positive association between openness to experience and narcissism (Furnham et al., 2013). The label and personality 'Openness and intellect' reflects intellectual engagement with abstract information and is correlated with IQ and working memory. There is a commonality between openness to experience and creativity, and entrepreneurs are known to have creative traits. Therefore, the literature and research findings provide a deeper understanding of openness to experience and narcissism. Narcissistic entrepreneurs tend to overestimate their positive qualities, particularly regarding cognitive abilities. As such, the findings show a positive association between narcissism and openness to experience amongst UK entrepreneurs, similar to the literature conducted on business students. This holds for the data on narcissism and openness to experience among UK entrepreneurs. Therefore, the findings of hypothesis 1 were as follows.

- **H_{01}** : There is no significant association between narcissism and openness to experience among UK entrepreneurs. (**REJECTED**)
- **H_{11}** : There is a significant association between narcissism and openness to experience among UK entrepreneurs. (**SUPPORTED**)

6.12 Analysis of Hypothesis 2 (H_2)

Hypothesis 2 (H_2) will be analysed using *simple linear regression below, looking at the association* between Narcissism and **conscientiousness** among UK entrepreneurs. The following proposed null and alternative hypotheses:

- **H₀₂:** There is no significant association between narcissism and conscientiousness amongst UK entrepreneurs.
- **H₁₂:** There is a significant association between narcissism and conscientiousness amongst UK entrepreneurs.

$$y = a + bx$$

$$y = \beta_0 + \beta_1 x + \varepsilon$$

Y: is the dependent variable; Narcissism

X: is the independent variable; conscientiousness

$$Narc = a + bCons$$

$$Narc = \beta_0 + \beta_1 Cons + \varepsilon$$

Narc = Narcissism,

Cons = Conscientiousness

Table 50 Summary of simple linear regression of narcissism and conscientiousness amongst UK entrepreneurs.

Narcissism and conscientiousness amongst UK entrepreneurs.								
N	Model	B	T	Sig.	ANOVA (Sig.)	R	R ²	F (df)
250	(Constant)	46.342	7.833	<0.001	0.309 ^b	0.065 ^a	0.004	1.039 (1, 248)
	Conscientiousness	0.196	1.019	0.309				
a. <i>Dependent Variable: Narcissism amongst UK entrepreneurs</i> b. <i>Predictor/Independent Variable: Conscientiousness</i>								

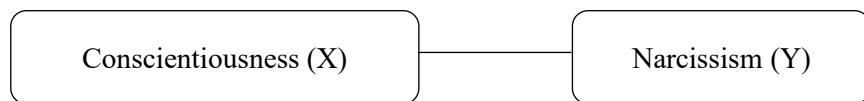
Source: SPSS Survey Results 2024, appendix E

Table 52 presents the model summary, coefficients, and ANOVA results for the simple linear regression analysis of narcissism and conscientiousness among UK entrepreneurs. The analysis was to test the hypothesis to confirm if conscientiousness would significantly affect Narcissism amongst UK entrepreneurs. The outcome reveals that $r = 0.065$ (6.5%) indicates a very weak correlation between narcissism and conscientiousness amongst UK entrepreneurs. By implication, as the conscience level increases, narcissism amongst UK entrepreneurs will also increase by 6.5%. Also, $R^2 = 0.004$ (0.4%) shows that conscientiousness can account for

variation in narcissism amongst UK entrepreneurs. In comparison, the balance of 99.6% reflects changes that have not been accounted for by other variables not captured in this study.

The simple linear regression operationalised equation is expressed as:

$$Narc = \beta_0 + \beta_1 Cons + \epsilon$$



Based on the result, the output will now be:

$$Narc = 46.342 + 0.196Cons \text{ -----Model Eq. One}$$

Where Narc - Narcissism

Cons – Conscientiousness amongst UK entrepreneurs.

The linear model equation reveals that, if consciousness is kept at a constant zero, narcissism amongst UK entrepreneurs would be 46.342. This suggests that when conscientiousness increases by 1 unit, Narcissism would be positively affected by a corresponding increase of 0.196 units at $t = 1.019$. Hence, Conscientiousness ($\beta = 0.196$, $t = 1.019$, $p = 0.309 > 0.05$) is a positive determinant of Narcissism amongst UK entrepreneurs, as the output reveals a statistically insignificant influence with a p-value greater than 0.05. Based on the outcomes, ***hypothesis 2, the null hypothesis (H_{02}) was not rejected, and there was insufficient statistical evidence to support the alternative hypothesis (H_{12})- not supported.*** There is no significant association between narcissism and conscientiousness amongst UK entrepreneurs. Although a positive association exists, the following section will analyse the empirical findings and the theoretical discussions.

6.13 Findings of Hypothesis 2 (H_2)

The simple linear regression results revealed that the association between narcissism and conscientiousness is insignificant, with a p-value of 0.309 greater than $p=0.05$. When

conscientiousness is kept constant, narcissism will increase by 46.342. The hypothesis looks at the dependent variable, narcissism, and the independent variable, conscientiousness. The results discussed in the previous section show an insignificant relationship between the two variables. The results showed statistical outcomes ($\beta = 0.196$, $t = 1.019$, $p = 0.309 > 0.05$), indicating no significant relationship between narcissism and conscientiousness amongst UK entrepreneurs. *The null hypothesis (H_{02}) was not rejected; There is no significant association between narcissism and conscientiousness amongst UK entrepreneurs.* Nonetheless, when conscientiousness is constant, narcissism would increase by 46.342, whereas conscientiousness increases by one unit; the narcissists will increase by 0.196 at $t=1.019$. Conscientiousness looks at industriousness, the need for achievement, self-discipline, the tendency to work effectively without being distracted and orderliness, such as neatness, perfectionism, and attention to rules. The existing literature shows no significant relationship between conscientiousness and narcissism (Zajenkowski and Szymaniak, 2021). The findings for hypothesis 2 are below.

- **H_{02} :** There is no significant association between narcissism and conscientiousness among UK entrepreneurs (**NOT REJECTED**).
- **H_{12} :** There is a significant association between narcissism and conscientiousness among UK entrepreneurs (**NOT SUPPORTED**).

6.14 Analysis of Hypothesis 3 (H_3)

Hypothesis 3 (H_3) will be analysed using *simple linear regression to examine the association between extraversion and narcissism among UK entrepreneurs*. The following proposed null and alternative hypotheses:

- **H_{03} :** There is no significant association between narcissism and extraversion among UK entrepreneurs.
- **H_{13} :** There is a significant association between narcissism and extraversion among UK entrepreneurs.

$$y = a + bx$$

$$y = \beta_0 + \beta_1 x + \epsilon$$

Y: is the dependent variable; Narcissism

X: is the independent variable; Extraversion

$$Narc = a + bExtra$$

$$Narc = \beta_0 + \beta_1 Extra + \epsilon$$

Narc= Narcissism,
Extra=Extraversion

Table 51 Summary of simple linear regression of narcissism and extraversion amongst UK entrepreneurs.

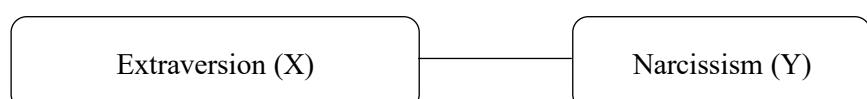
Narcissism and extraversion amongst UK entrepreneurs.								
N	Model	B	T	Sig.	ANOVA (Sig.)	R	R ²	F (df)
250	(Constant)	28.684	6.276	<0.001	<0.001 ^b	0.314 ^a	0.099	27.11 (1, 248)
	Extraversion	0.895	5.207	<0.001				
a. <i>Dependent Variable: Narcissism amongst UK entrepreneurs</i> b. <i>Predictor/ Independent Variable: Extraversion</i>								

Source: SPSS Survey Results 2024, appendix E,

Table 53 presents the **model summary**, **coefficients**, and ANOVA results for the simple linear regression analysis of narcissism and extraversion among UK entrepreneurs. The analysis was to test the hypothesis to confirm if extraversion would significantly affect Narcissism amongst UK entrepreneurs. The outcome reveals that $r = 0.314$ (31.4%) indicates a weak correlation between narcissism and extraversion amongst UK entrepreneurs. By implication, as the extraversion level increases, Narcissism amongst UK entrepreneurs will also increase by 31.4%. Also, $R^2 = 0.099$ (9.9%) shows that extraversion can account for variation in narcissism amongst UK entrepreneurs. In comparison, the balance of 90.1% reflects changes that have not been accounted for by other variables not captured in this study.

The simple linear regression operationalised equation is expressed as:

$$Narc = \beta_0 + \beta_1 Extra + \epsilon$$



Based on the result, the output will now be:

$$Narc = 28.684 + 0.895Extra \text{ --- ----- Model Eq. One}$$

Where Narc - Narcissism

Extra – Extraversion amongst UK entrepreneurs.

The linear model equation reveals that, when extraversion is held constant at 0, narcissism amongst UK entrepreneurs would be 28.684. This suggests that when one unit improves extraversion, narcissism would be positively affected by a corresponding increase of 0.895 units at $t = 5.207$. Hence, extraversion ($\beta = 0.895, t = 5.207, p = <0.001 < 0.05$) is a positive determinant of Narcissism amongst UK entrepreneurs, as the output reveals a statistically significant influence with a p-value less than 0.05. Based on the outcomes, **hypothesis 3, the null hypothesis (H_{03}) rejected, and the alternative hypothesis (H_{13}) supported**. There is a significant association between narcissism and extraversion through a positive association.

6.15 Findings of Hypothesis 3 (H_3)

From the statistical outcome, it was observed that there is a statistically significant association between narcissism and extraversion among UK entrepreneurs. The independent variable was extraversion, and the dependent variable was narcissism. The simple linear regression results revealed that the association between narcissism and extraversion is significant, with a p-value of <0.001 , which is less than $p=0.05$. When extraversion is kept constant, narcissism will increase by 28.684. The results from the previous section indicate a significant relationship between the two variables. The results showed statistical outcomes ($\beta = 0.895, t = 5.207, p = < 0.001 < 0.05$), which indicates the significant relationship between narcissism and extraversion amongst UK entrepreneurs. Where extraversion increases by one unit, narcissism will increase by 0.895 at $t=5.207$. In the case of extraversion, there are two factors to discuss: assertiveness, social status, and leadership (DeYoung et al., 2007). **The alternative hypothesis (H_{13}) was supported; There is a significant association between narcissism and extraversion amongst UK entrepreneurs.** This also involves levels of enthusiasm and the tendency to experience positive emotions. The literature notes that those who are high in narcissism will be positively associated with assertiveness and social dominance aligned with extraversion. The theoretical concept has found that there is a positive association between narcissism and extraversion (Zajenkowski et al., 2021), and the statistical outcome supports this theory amongst UK entrepreneurs. The empirical data and the theory align with the positive association between narcissism and extraversion. Extraversion also

aligns with reward and assertiveness, working towards a goal and confirms the results of a high overlap between narcissism and assertiveness. Narcissists are sensitive to appetitive rewards, which reinforce their behaviours towards social status, dominance, and achievement (Mandrekar & Sarwate, 2021).

- **H₀₃:** There is no significant association between narcissism and extraversion amongst UK entrepreneurs (**REJECTED**)
- **H₁₃:** There is a significant association between narcissism and extraversion amongst UK entrepreneurs (**SUPPORTED**)

6.16 Analysis of Hypothesis 4 (H₄)

Hypothesis 4 (H₄) will be analysed using *simple linear regression to examine the association between agreeableness and narcissism among UK entrepreneurs*. The following proposed null and alternative hypotheses:

- **H₀₄:** There is no significant association between narcissism and agreeableness amongst UK entrepreneurs.
- **H₁₄:** There is a significant association between narcissism and agreeableness amongst UK entrepreneurs.

$$y = a + bx$$

$$y = \beta_0 + \beta_1 x + \varepsilon$$

Y: is the dependent variable; Narcissism

X: is the independent variable; Agreeableness

$$Narc = a + bAgree$$

$$Narc = \beta_0 + \beta_1 Agree + \varepsilon$$

Narc= Narcissism,

Agree=Agreeableness

Table 52 Summary of simple linear regression of narcissism and agreeableness amongst UK entrepreneurs.

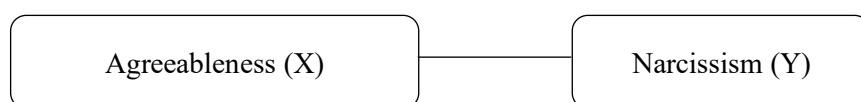
Narcissism and agreeableness amongst UK entrepreneurs.								
N	Model	B	T	Sig.	ANOVA (Sig.)	R	R ²	F (df)
250	(Constant)	41.24	9.228	<0.001	0.013 ^b	0.157 ^a	0.025	6.258 (1, 248)
	Agreeableness	0.389	2.502	0.013				
a. <i>Dependent Variable: Narcissism amongst UK entrepreneurs</i> b. <i>Predictor/ Independent Variable: Agreeableness</i>								

Source: SPSS Survey Results 2024, appendix E.

Table 54 presents the **model summary**, **coefficients**, and ANOVA results for the simple linear regression analysis of narcissism and agreeableness among UK entrepreneurs. The analysis was to test the hypothesis to confirm if agreeableness would significantly affect narcissism amongst UK entrepreneurs. The outcome reveals that $r = 0.157$ (15.7%) indicates a very weak correlation between narcissism and agreeableness amongst UK entrepreneurs. By implication, as the agreeableness level increases, narcissism amongst UK entrepreneurs will also increase by 15.7%. Also, $R^2 = 0.025$ (2.5%) shows that agreeableness can account for variation in narcissism amongst UK entrepreneurs. In comparison, the 97.5% balance reflects changes not accounted for by other variables not captured in this study.

The simple linear regression operationalised equation is expressed as:

$$Narc = \beta_0 + \beta_1 Agree + \epsilon$$



Based on the result, the output will now be:

$$Narc = 41.24 + 0.389 Agree \text{ ----- Model Eq. One}$$

Where Narc - Narcissism

Agree – Agreeableness amongst UK entrepreneurs.

The linear model equation reveals that, when agreeableness is held constant at 0, narcissism amongst UK entrepreneurs would be 41.24. This suggests that when one unit of agreeableness increases, narcissism would be positively affected by a corresponding increase of 0.389 units at $t = 2.502$. Hence, agreeableness ($\beta = 0.389$, $t = 2.502$, $p = 0.013 < 0.05$) is a positive determinant of Narcissism amongst UK entrepreneurs, as the output reveals a statistically significant influence ($p < 0.05$). Based on the outcomes., **hypothesis 4, the null hypothesis (H_{04}) rejected, and the alternative hypothesis (H_{14}) supported.** There is a significant association between narcissism and agreeableness among UK entrepreneurs.

6.17 Findings of Hypothesis 4(H_4)

The statistical outcome has demonstrated that there is a significant association between narcissism and agreeableness amongst UK entrepreneurs. Narcissism is the dependent variable, and agreeableness is the independent variable within the statistical equation. The statistical result of the simple linear regression shows a p-value of 0.013, which is less than 0.05; when narcissism is held constant, agreeableness will increase by 41.24. The result was discussed in the previous section, and this section will analyse the theoretical concepts aligned with the empirical results. The results discussed in the section above ($\beta = 0.389$, $t = 2.502$, $p = 0.013 < 0.05$) indicate a significant relationship between the two, where, for every one unit increase in agreeableness, narcissists should increase by 0.389 at $t = 2.502$. **The alternative hypothesis (H_{14}) was supported; There is a significant association between narcissism and agreeableness amongst UK entrepreneurs.** The conceptual framework from the literature will be discussed in this section, aligned with the statistical outcome. The agreement looks at the two domains: primary compassion, which includes an emotional process of showing empathy, caring and concern for others. Agreeableness also involves politeness, including showing respect for others' needs and desires, and a low tendency toward competitive behaviours (DeYoung et al., 2007). Based on the review of the theory, narcissism is negatively associated with agreeableness, as narcissist are more concerned with their self-views and are very boastful. However, the statistics aligned with a positive direction, which could be attributed to the theory that entrepreneurs are more agreeable with the interconnectedness of narcissism. Their lack of empathy towards others makes it extremely difficult to be agreeable (Zajenkowski et al., 2021). Empirical data in the literature provide mixed results regarding the association between narcissism and agreeableness. Narcissists can likely be pleasant at first interactions until a relationship is formed with others around them, before disagreements begin.

Agreeableness is associated with low competitiveness, whereas narcissism is characterised by high competitiveness in the literature. Narcissists are known to be uncooperative, often rude and aggressive. The literature provides mixed results in other studies (Zajenkowski & Szymaniak, 2021b). The results show a positive relationship between narcissism and agreeableness amongst UK entrepreneurs and may argue for mixed results from the theory.

- **H₀₄:** There is no significant association between narcissism and agreeableness among UK entrepreneurs (**REJECTED**)
- **H₁₄:** There is a significant negative association between narcissism and agreeableness among UK entrepreneurs (**SUPPORTED**)

6.18 Analysis of Hypothesis 5 (H₅)

Hypothesis 5 (H₅) will be analysed using *simple linear regression, to examine the association* between **neuroticism** and narcissism among UK entrepreneurs. The following proposed null and alternative hypotheses:

- **H₀₅:** There is no significant association between narcissism and neuroticism amongst UK entrepreneurs.
- **H₁₅:** There is a significant association between narcissism and neuroticism amongst UK entrepreneurs.

$$y = a + bx$$

$$y = \beta_0 + \beta_1 x + \varepsilon$$

Y: is the dependent variable; Narcissism

X: is the independent variable; Neuroticism

$$Narc = a + bNeuro$$

$$Narc = \beta_0 + \beta_1 Neuro + \varepsilon$$

Narc=Narcissism,

Neuro=Neuroticism

Table 53 Summary of simple linear regression of narcissism and neuroticism amongst UK entrepreneurs.

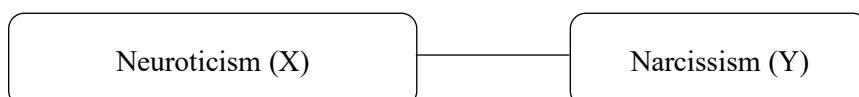
Narcissism and neuroticism amongst UK entrepreneurs.								
N	Model	B	T	Sig.	ANOVA (Sig.)	R	R ²	F (df)
250	(Constant)	56.808	15.029	<0.001	0.236 ^b	0.075 ^a	0.006	1.414 (1, 248)
	Neuroticism	-0.174	-1.189	0.236				
<i>a. Dependent Variable: Narcissism amongst UK entrepreneurs</i> <i>b. Predictor/ Independent Variable: Neuroticism</i>								

Source: SPSS Survey Results 2024, appendix E,

Table 55 presents the **model summary**, **coefficients**, and ANOVA results for the simple linear regression analysis of narcissism and neuroticism among UK entrepreneurs. The analysis was to test the hypothesis to confirm if neuroticism would significantly affect Narcissism amongst UK entrepreneurs. The outcome reveals that the $r = 0.075$, which is also presented as 7.5%, indicates that there is a very weak correlation between the two variables - narcissism and neuroticism amongst UK entrepreneurs. By implication, as neuroticism level increases, Narcissism amongst UK entrepreneurs will also increase by 7.5%. Also, the $R^2 = 0.006$ or 0.6% explains the extent to which neuroticism can account for the variation in narcissism amongst UK entrepreneurs. In comparison, the balance of 99.4% reflects changes that have not been accounted for by other variables not captured in this study.

The simple linear regression operationalised equation is expressed as:

$$Narc = \beta_0 + \beta_1 Neuro + \epsilon$$



Based on the result, the output will now be:

$$Narc = 56.808 - 0.174 Neuro \text{ -----Model Eq. One}$$

Where Narc - Narcissism

Neuro = Neuroticism amongst UK entrepreneurs.

The linear model equation reveals that, where neuroticism is kept at a constant zero, narcissism amongst UK entrepreneurs would be 56.808. This suggests that when neuroticism is improved by one unit, narcissism would be negatively affected by a corresponding decrease of -0.174 unit at $t = -1.189$. Hence, neuroticism ($\beta = -0.174$, $t = -1.189$, $p = 0.236 > 0.05$) is a negative determinant of narcissism amongst UK entrepreneurs, as the output reveals a statistically insignificant influence with a p-value greater than 0.05. Based on the outcomes, ***hypothesis 5, the null hypothesis (H_{05}) not rejected, and the alternative hypothesis (H_{15}) not supported.*** There is no significant association between narcissism and neuroticism among UK entrepreneurs.

6.19 Findings of Hypothesis 5 (H_5)

The statistical results show that there is no significant relationship between narcissism and neuroticism amongst UK entrepreneurs. In the statistical analysis, narcissism was the dependent variable, and neuroticism was the independent variable. The statistical outcome of the simple linear equation shows a p-value of 0.236, which is not significant at the 0.05 level. Therefore, narcissism is statistically insignificant to narcissism amongst UK entrepreneurs. When narcissism is kept at a constant, neuroticism will increase by 56.808. The result was discussed in the previous section above ($\beta = -0.174$, $t = -1.189$, $p = 0.236 > 0.05$); this indicates an insignificant relationship between the two, where neuroticism increases by one unit narcissist should decrease by -0.174 at $t = -1.189$. ***The null hypothesis (H_{05}) not rejected; There is no significant association between narcissism and neuroticism amongst UK entrepreneurs.***

The conceptual framework is discussed by (DeYoung et al., 2007). Neuroticism is defined by two variables: volatility and withdrawal. Volatility includes emotional lability, irritability, anger, and difficulty controlling emotional impulses. Withdrawal, on the other hand, involves passive avoidance, which increases depression, vulnerability, anxiety, and adverse effects reflected inwards (DeYoung, 2015). The literature shows that there is a negative relationship with narcissism, which shows low anxiety and depression (Zajenkowski et al., 2021). Entrepreneurship is a risky journey, and therefore, narcissistic entrepreneurs are not as anxious or depressed. Thus, the theoretical framework supports the empirical findings of no significant relationship between narcissism among UK entrepreneurs and a negative correlation between the two.

- **H₀₅:** There is no significant association between narcissism and neuroticism amongst UK entrepreneurs (**NOT REJECTED**)
- **H₁₅:** There is a significant negative association between narcissism and neuroticism amongst UK entrepreneurs (**NOT SUPPORTED**)

6.21 Analysis of Hypothesis 6 (H₆)

Hypothesis 6 (H₆) will be analysed using ***Multiple linear regression, which examines the association*** between narcissism and the components of the Big Five personality traits among UK entrepreneurs. The following proposed null and alternative hypotheses:

- **H₀₆:** There is no significant relationship between narcissism and the Big Five personality traits among UK entrepreneurs.
- **H₁₆:** There is a significant relationship between narcissism and the Big Five personality traits among UK entrepreneurs.

The equation below operationalises the multiple linear regression used to assess the association between the dependent variable, narcissism, and the independent variable, Big Five personality.

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \epsilon$$

Y: is the dependent variable, which is Narcissism

X: is the independent variable; Components of Big Five Personalities: Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism

$$Narc = \beta_0 + \beta_1 Open + \beta_2 Cons + \beta_3 Extra + \beta_4 Agree + \beta_5 Neuro + \epsilon$$

Where Narc - Narcissism

BFI = Big Five Personality Components

Open = Openness to Experience

Cons = Conscientiousness

Extra = Extraversion

Agree = Agreeableness

Neuro = Neuroticism

Table 54 Summary of multiple linear regression of narcissism and the components of the big five Personality amongst UK entrepreneurs

Narcissism and Big Five Personality amongst UK entrepreneurs.								
N	Model	B	T	Sig.	ANOVA (Sig.)	R	Adjusted R ²	F (pdf)
250	(Constant)	24.788	3.691	<.001	<.001 ^b	0.415 ^a	0.155	10.167 (5,244)
	Openness to Experience	0.409	3.649	<.001				
	Conscientiousness	-0.007	-0.033	0.974				
	Extraversion	0.668	3.444	<.001				
	Agreeableness	0.198	1.166	0.245				
	Neuroticism	-0.421	-2.818	0.005				
<p><i>a. Dependent Variable: NARCISSISM -NPI 40</i></p> <p><i>b. Predictors: (Constant), NEUROTICISM, OPENNESS TO EXPERIENCE, AGREEABLENESS, CONSCIENTIOUSNESS, EXTRAVERSION</i></p>								

Source: SPSS Survey Results 2024, appendix E

$$Narc = \beta_0 + \beta_1 Open + \beta_2 Cons + \beta_3 Extra + \beta_4 Agree + \beta_5 Neuro + \epsilon$$

$$Narc = 24.788 + 0.409 Open - 0.007 Cons + 0.668 Extra + 0.198 Agree - 0.421 Neuro + \epsilon$$

Where Narc - Narcissism

BFI – Big Five Personality Components

Open – Openness to experience amongst UK entrepreneurs.

Cons- Conscientiousness amongst UK entrepreneurs

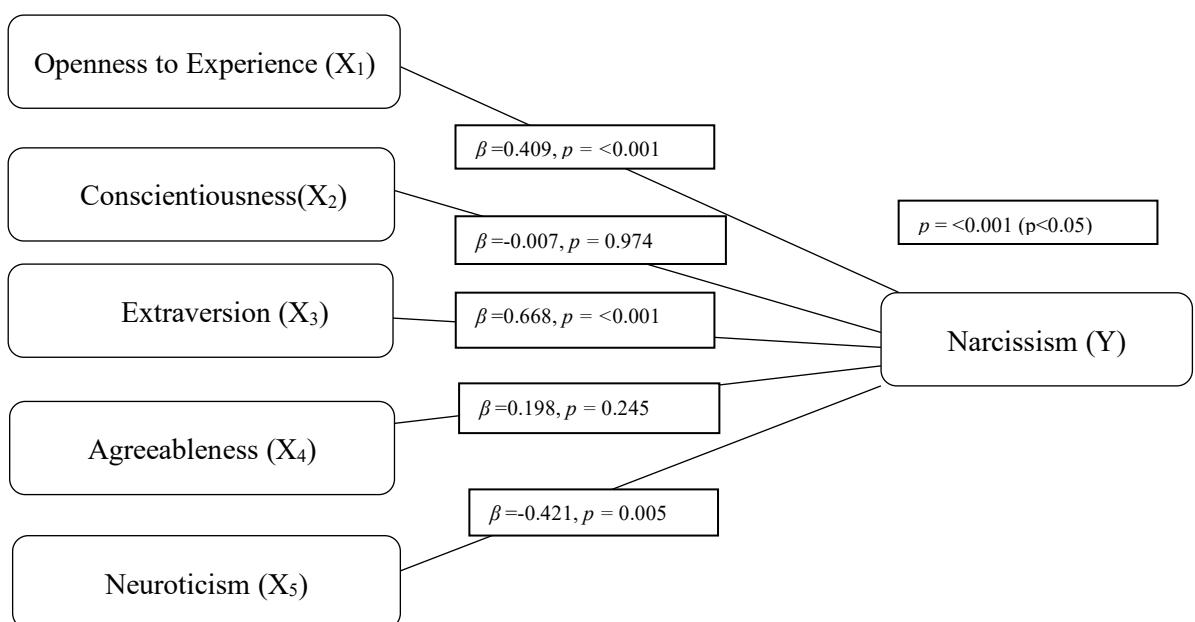
Extra- Extraversion amongst UK entrepreneurs

Agree- Agreeableness amongst UK entrepreneurs.

Neuro- Neuroticism amongst UK entrepreneurs

The regression model shows that, holding the components of the Big Five personality traits at zero, narcissism amongst UK entrepreneurs would be 24.788, which is positive. The results depicted openness [coef., $\beta = 0.409, p = <0.001$], extraversion [coef., $\beta = 0.668, p = <0.001$], as statistically positively significant; for neuroticism [coef., $\beta = -0.421, p = 0.005$] as statistically negatively significant; while conscientiousness [coef., $\beta = -0.007, p = 0.974$] and agreeableness [coef., $\beta = 0.198, p = 0.245$] were statistically insignificant. Hence, the results of the multiple regression analysis, as seen in the model, indicate that when all other variables of the Big Five personality (openness, conscientiousness, extraversion, agreeableness, and neuroticism) are improved by one unit, narcissism would increase by 0.409, -0.007, 0.668, 0.198, and -0.421, respectively and vice versa. This implies that increases in openness, extraversion, and agreeableness would lead to higher levels of narcissism among UK entrepreneurs. Also, the F-statistics ($df = 5, 244 = 10.167$ at $p = <0.001$ ($p < 0.05$) indicates that the overall model is significant in predicting that UK entrepreneurs who are narcissistic are associated with the components of the big five personality traits, which implies that the big five personality traits except conscientiousness and agreeableness are traits inherent in narcissistic UK entrepreneurs. Therefore, ***hypothesis 6, the null hypothesis (H_0) rejected, and the alternative hypothesis (H_1) supported.*** There is a significant association between narcissism and the Big Five personality traits amongst UK entrepreneurs.

Figure 16 Graphical illustration of Hypothesis (H_6) and Research Question



6.22 Findings of Hypothesis 6 (H_6)

Based on the statistical results of the multiple linear regression, it was observed that when all variables of the five significant components are held constant, the results of the multiple regression analysis, as seen in the section above, indicate that when all other variables of the Big Five personality (openness, conscientiousness, extraversion, agreeableness, and neuroticism) increase by one unit, narcissism would increase by 0.409, -0.007, 0.668, 0.198, and -0.421, respectively, amongst UK entrepreneurs. From the empirical results for narcissism and the five significant components amongst UK entrepreneurs, there is a positive correlation between narcissism and openness to experience, extraversion, and agreeableness. At the same time, there is a negative correlation between conscientiousness and neuroticism.

Overall, based on the statistical outcome, the empirical results observed that there was a positive significant relationship between narcissism, openness to experience and extraversion with an empirical result of [coef., $\beta = 0.409, p = <0.001$], extraversion [coef., $\beta = 0.668, p = <0.001$], respectively this has been supported by the literature which states that there is positive correlation between narcissism and openness to experience and extraversion, this shown based on similar studies by (Zajenkowski & Szymaniak, 2021). Based on the empirical results, there is a significant relationship between neuroticism and narcissism among UK entrepreneurs; neuroticism was negatively correlated [coef., $\beta = -0.421, p = 0.005$]. Based on the theory that narcissism was significantly negatively correlated with neuroticism, the research found a positive correlation between neuroticism and covert narcissism (Zajenkowski & Szymaniak, 2021). Given that entrepreneurs are more than covert and less fearful, it was accepted that the empirical results aligned with the theory that neuroticism is negatively correlated. The thesis reflects the main reflection of narcissism and grandiose narcissism. There was no significant relationship between narcissism amongst UK entrepreneurs and conscientiousness and agreeableness conscientiousness [coef., $\beta = -0.007, p = 0.974$] and agreeableness [coef., $\beta = 0.198, p = 0.245$], this result supports the theoretical framework, with conscientiousness being negatively correlated and insignificant to narcissism, surprising agreeableness was positively correlated and negligible, as compared to the literature, where my agreeableness research to be negatively correlated as narcissist are usually not cooperative (Zajenkowski & Szymaniak, 2021). ***The null hypothesis H_{06} rejected and alternative hypothesis H_{16} supported; There is a***

significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs

The Big Five personality traits are openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. These were examined individually in the previous empirical results. From a theoretical perspective, narcissism is associated with the Big Five, as it shares traits with extraversion, group-oriented behaviour, socialising, and energy. Narcissists also perceive themselves as extraverted. They are less likely to be agreeable, and narcissism tends to counteract the trait of agreeableness. There is no clear understanding of the relationship between conscientiousness and narcissism. There was no significant relationship between narcissism and conscientiousness, which was consistent with the theory. Narcissism is also associated with neuroticism. Narcissism is also associated with openness to experience, such as high creativity and imagination. These findings, therefore, conform to the relationship between narcissism and the Big Five components amongst UK entrepreneurs and the existing literature.

- **H₀₆**: There is no significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs (**REJECTED**).
- **H₁₆**: There is a significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs (**NOT SUPPORTED**).

6.23 Analysis of Hypothesis 7 (H₇)

This section discusses the statistical outcome of Hypothesis 7 (H₇). The following proposed null and alternative hypotheses:

- **H₀₇**: Narcissism does not significantly influence the preference for internal versus external funding amongst UK entrepreneurs.
- **H₁₇**: Narcissism significantly influences the preference for internal versus external funding amongst UK entrepreneurs.

The hypothesis will be analysed using Binary Logistic Regression (**SPSS**), *in which the dependent variable takes a value of either 0 or 1*.

The probability of observing a 0 or 1 depends on one or more explanatory variables.

The below equation is the operationalisation of the equation.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + u_i$$

With a binary dependent variable, Y_i is called the linear probability model.

$$E(Y|X_1, X_2, \dots, X_k) = P(Y = 1|X_1, X_2, \dots, X_k)$$

Whereby.

$$P(Y = 1|X_1, X_2, \dots, X_k) = \beta_0 + \beta_1 + X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

$$\text{logit}(P(Y=1)) = \beta_0 + \beta_1 (\text{Narcissism}) + \dots + u_i$$

Y is the dependent variable, which measures UK entrepreneurs' preference for the source of funding, Internal or external.

UK entrepreneurs were asked which funding source they prefer, internal or external. The choice is Dichotomous and based on a binary logistics group of 0 and 1.

X: is the independent variable; Narcissism

Table 55 Summary of Hypothesis Seven (H_7) variable *X*, and dichotomous coding

Dependent Variable Encoding	
Original Value	Internal Value
Internal sources of funding , personal funds, family, and friends	0
External sources of funding , bank loans, equity from investors	1

Table 56 Hypothesis Seven (H_7) case processing for sample

Case Processing Summary			
Unweighted Cases ^a		N	Per cent
Selected Cases	Included in Analysis	250	100
	Missing Cases	0	0
	Total	250	100
Unselected Cases		0	0
Total		250	100
a. If weight is in effect, see the classification table for the total number of cases.			

The logistic regression will produce an equation that can be used to estimate the probability of preferring internal versus external funding using the narcissism scale. Therefore, the two blocks from the statistical outcome will be compared. The complete model (Block 1) below contains all the selected independent variables, and the **null model (Block 0)** includes no independent variables.

Block 0: Beginning Block

Table 57 : Summary of hypothesis seven (H_7), dichotomous Variable X, preference for funding block 0 (Beginning Block)

Classification Table ^{a,b}					
Observed			Predicted		
			FUNDING PREFERENCE		Percentage Correct
Step 0	FUNDING PREFERENCE	Internal source	External source	source	
		Internal source	210	0	100
	External source	External source	40	0	0
Overall Percentage					84
a. Constant is included in the model.					
b. The cut value is .500					

**Internal source of funding, personal funds, family and friends*

**External source of funding, bank loans, equity from investors*

The analysis included 250 respondents. The model predicts that all the entrepreneurs who participated in the study will prefer internal funding, with an overall prediction rate of 84%.

Block 1: Method =Enter

Table 58 Summary of hypothesis seven (H_7), dichotomous Variable X, preference for funding

Classification Tables					
Observed			Predicted		
			FUNDING PREFERENCE		Percentage Correct
Step 1	FUNDING PREFERENCE	Internal source	Internal	External	
		source	source	source	
	Overall Percentage				84
a. The cut value is .500					

84% of individuals were classified using the Null model, and 100% were classified as internal funding. The whole model is then tested using the likelihood ratio (LR) test to determine whether it is significant (p -value < 0.05) relative to the null model in the **Omnibus Tests of Model Coefficients**.

Table 59 Omnibus Tests of Model Coefficients

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	3.934	1	0.047
	Block	3.934	1	0.047
	Model	3.934	1	0.047

The model was statistically significant when compared to the null model.

$$X^2 (1, N=250) = 3.934, P=0.047 < 0.05$$

Table 60 Hypothesis Seven (H_7) Model Summary

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	215.901 ^a	0.016	0.027

The Nagelkerke square value, R, is 0.027, 2.7%; R2 is 0.016, 1.6%. Therefore, the model explains 2.7% and 1.6% of the variance in the dependent variable, respectively.

Table 61 Hosmer and Lemeshow Test

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	9.303	8	0.317

The Hosmer and Lemeshow test are insignificant, with $P = 0.317 > 0.005$

Table 62 Hypothesis seven (H_7) and variable outcome

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	NARCISSISM2	0.042	0.021	3.989	1	0.046	1.043	1.001	1.087
	Constant	-3.908	1.158	11.383	1	<.001	0.02		
a. Variable(s) entered on step 1: NARCISSISM- NPI40									

The odds ratio for narcissism and the dependent variable is 1.043 for every unit increase in narcissism, so the probability of preference for external funding increases. Therefore, UK narcissist entrepreneurs are 1.043 more likely to prefer external funding (coded as '1') than internal funding (coded as '0'). Narcissism and the dependent variable preference for funding $p=0.046<0.05$, and a significant relationship exists between narcissism and preference for internal and external funding. Based on the outcomes, ***hypothesis 7, the null hypothesis (H_{07}) rejected, and the alternative hypothesis (H_{17}) supported.*** Narcissism significantly influences the preference for external versus internal funding amongst UK entrepreneurs. There is a significant association between narcissism and a preference for funding, and they are more inclined to prefer external funding over internal funding.

6.24 Findings of Hypothesis 7 (H_7)

From the empirical results, 250 entrepreneurs were asked whether they prefer internal funding choices, such as personal funds, family, and friends, or external funding, such as equity and debt, from investors and banks. Based on the BLR results, internal financing and external funding were represented as '0' and '1', respectively. Narcissistic entrepreneurs prefer external funding based on the statistical results ($p=0.046<0.05$) and the expected probability outcome ($Exp(B)=1.043$), which is above 1 and closer to the option of preferring external funding. The literature suggests that narcissists prefer internal financing over debt and equity financing, thereby confirming the Pecking Order Theory. Narcissists are more likely to maintain control over their entities and, as a result, may avoid incorporating external influences. Additionally, with their fragile ego, the narcissists may be intimidated by the idea of failure in sourcing

external funding. Although minimal studies relating to narcissism and entrepreneurial resource acquisition areas within the literature (Badloe & Janssen, 2023). The current literature has primarily focused on crowdfunding, where the findings suggest that narcissistic entrepreneurs were less likely to achieve their crowdfunding targets, which may imply that the narcissist may not prefer the external process of financial resource acquisition.

Therefore, the results presented in the data differed from those in the existing literature, suggesting that narcissists may prefer external funding. Some studies indirectly examine risk-taking and decision-making with narcissistic entrepreneurs and have found that narcissists are prone to make more risky investment decisions. However, they are more likely to rise to leadership and pursue entrepreneurship (Foster et al., 2011). Financial decisions are usually related to the risk's individuals are willing to take when making financial choices; therefore, would a narcissist be expected to make risky financial decisions? Those who are strongly motivated by rewards are likely to take risks. Entrepreneurship is usually a risky path with rewarding outcomes (Foster et al., 2011). Narcissists are more likely to engage in high-risk, high-reward financial investment strategies, investing in stocks rather than bonds. The literature supported the hypothesis that narcissistic entrepreneurs are likely to pursue and endorse risky business investments.

From the statistical results, it was observed that narcissists would prefer external funding due to the risk-taking side of the narcissistic personality and combined with their charisma, may become very skilled at resource acquisition as they obtain early stakeholders such as team members; they also do a positive job at it, particularly for start-up entrepreneurs. Research previously shows that narcissists succeed more in initial resource acquisition and fundraising due to their charisma and ability to communicate trust and security by turning uncertainty into an opportunity (Badloe & Janssen, 2023). The thesis contributes to the literature through empirical results; it is important to understand how narcissistic entrepreneurs make financial decisions. Personality affects the selection of financing options for entrepreneurs. Narcissistic individuals exhibit intense arrogance and risk-taking decisions. Therefore, the results presented in the data differed from those in the existing literature, suggesting that narcissists may prefer external funding. This represents a contribution to theory, as it may have implications for external funders such as venture capitalists, banks, and angel investors. Given the charismatic nature of narcissists and the findings of H1, H3, and H7 on intellect and social dominance, it was important to examine whether the BFI openness to experience and extraversion moderated the significance of narcissistic entrepreneurs' preferences for external funding.

- **H₀₇**: Narcissism does not significantly influence the preference for internal versus external funding amongst UK entrepreneurs (**REJECTED**)
- **H₁₇**: Narcissism significantly influences the preference for internal versus external funding amongst UK entrepreneurs (**SUPPORTED**)

6.25 Analysis of Hypothesis 8a (H_{8a}).

Hypothesis 8a (H_{8a}) will be analysed using the **Binary Logistic Regression in (SPSS)**, to analyse the following proposed null and alternative hypotheses:

- **H_{08a}**: Among narcissistic UK entrepreneurs, openness to experience does not significantly influence preference for external funding.
- **H_{18a}**: Among narcissistic UK entrepreneurs, openness to experience significantly influences preference for external funding.

The hypothesis will be analysed using Binary Logistics Regression (**SPSS**), *in which the dependent variable takes either 0 or 1 value.*

The probability of observing a 0 or 1 depends on one or more explanatory variables.

The below equation is the operationalisation of the equation.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + u_i$$

With a binary dependent variable, Y_i is called the linear probability model.

$$E(Y|X_1, X_2, \dots, X_k) = P(Y = 1|X_1, X_2, \dots, X_k)$$

Whereby.

$$P(Y = 1|X_1, X_2, \dots, X_k) = \beta_0 + \beta_1 + X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

$$\text{logit}(P(Y=1)) = \beta_0 + \beta_1(\text{Narcissism}) + \beta_2(\text{Openness}) + \dots + u_i$$

Y is the dependent variable, which measures UK entrepreneurs' preference for the source of funding, Internal or external.

UK entrepreneurs were asked which funding source they preferred: internal or external. The choice is Dichotomous and based on a binary logistic regression with 0 and 1.

X: are the independent variables: Narcissism, and Openness to experience

Table 63 Summary of Hypothesis Eight (H_{8a}) variable X and dichotomous coding

Dependent Variable Encoding	
Original Value	Internal Value
Internal source of funding, personal funds, family and friends	0
External source of funding, bank loans, equity from investors	1

Table 64 Hypothesis Eight (H_{8a}) case processing for the sample

Case Processing Summary			
Unweighted Cases ^a		N	Per cent
Selected Cases	Included in Analysis	250	100
	Missing Cases	0	0
	Total	250	100
Unselected Cases		0	0
Total		250	100
a. If weight is in effect, see the classification table for the total number of cases.			

The logistic regression process will produce an equation that can be used to estimate the probability of preference for internal versus external funding using the narcissism scale. Therefore, the two blocks from the statistical outcome will be compared. The complete model

(Block 1) below contains all the selected independent variables, and the **null model (Block 0)** includes no independent variables.

Block 0: Beginning Block

Table 65 Summary of hypothesis eight (H_{8a}), dichotomous Variable X, preference for funding block (Beginning Block)

Classification Table ^{a,b}					
Observed			Predicted		
			FUNDING PREFERENCE		Percentage Correct
Step 0	FUNDING PREFERENCE	Internal source	Internal	External	
		External source	source	source	
	Overall Percentage				84

a. Constant is included in the model.
b. The cut value is .500

**Internal source of funding, personal funds, family and friends*

**External source of funding, bank loans, equity from investors*

The analysis included 250 respondents. The model predicts that all the entrepreneurs who participated in the study will prefer internal funding, with an overall prediction rate of 84%.

Block 1: Method =Enter

Table 66 Summary of hypothesis eight (H_{8a}), dichotomous Variable X, preference for funding block

Classification Tables					
Observed			Predicted		
			FUNDING PREFERENCE		Percentage Correct
Step 1	FUNDING PREFERENCE	Internal source	Internal	External	source
		External source	40	0	0
		Overall Percentage			84
a. The cut value is .500					

84% of individuals were classified using the Null model, and 100% were classified as internal funding. The whole model is then tested using the likelihood ratio (LR) test to determine whether it is significant (p -value < 0.05) relative to the null model in the **Omnibus Tests of Model Coefficients**.

Table 67 Omnibus Tests of Model Coefficients

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	4.169	2	0.124
	Block	4.169	2	0.124
	Model	4.169	2	0.124

The model was statistically insignificant when compared to the null model.

$$X^2 (2, N=250) = 4.169, P=0.124>0.05$$

Table 68 Hypothesis eight(H_{8a}), Model Summary

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	215.666 ^a	0.017	0.028
a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.			

The Nagelkerke square value, R, is 0.028, which is 2.8%; R² is 0.017, which is 1.7%. Therefore, the model explains 2.8% and 1.7% of the variance in the dependent variable, respectively.

Table 69 Hosmer and Lemeshow Test

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	16.291	8	0.038

The Hosmer and Lemeshow test are significant, with P= 0.038 < 0.05. Although the Hosmer–Lemeshow test indicated a statistically significant result (p = 0.038), suggesting some deviation from a perfect fit, this is primarily because it is not ideal for large samples (n = 250). Other diagnostic measures indicated the model performed reasonably well. Therefore, while the model may not perfectly represent the data, it provides a helpful framework for understanding the key predictors of the outcome. From Hypothesis 7 (H 7), the Hosmer-Lemeshow test is significant (P = 0.038 < 0.05), indicating a perfect fit with narcissism as the predictor and the main predictor examined within the model. This further supports and demonstrates the relationship in the statistical outcome when narcissism is compared to openness and the relation with preference for funding.

Table 70 Hypothesis eight (H_8) and variable outcome

Variables in the Equation								95% C.I. for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	
								Upper	
Step 1 ^a	NARCISSISM2	0.046	0.022	4.173	1	0.041	1.047	1.002	1.094
	OPENNESS TO EXPERIENCE	-0.020	0.041	0.235	1	0.628	0.980	0.904	1.063
	Constant	-3.351	1.624	4.258	1	0.039	0.035		

a. Variable(s) entered on step 1: NARCISSISM2, OPENNESS TO EXPERIENCE.

The odds ratio for narcissism and the dependent variable is 1.053 for every unit increase in Narcissism, so the probability of preference for external funding increases with the relationship of extraversion. Therefore, UK narcissist entrepreneurs are 1.053 more likely to prefer external funding (coded as '1') than internal funding (coded as '0'). Narcissism is statistically significant and increases with openness to experience ($p=0.041 < 0.05$). Openness to experience with a $p=0.628 > 0.05$ means the relationship between openness to experience and the dependent variable is insignificant as the p-value is more significant than 0.05, and the odds ratio is 0.980. The odds ratio for narcissism and openness to experience are; **Exp(B) 1.047, and 0.980** respectively; based on the results, narcissism was statistically significant, and the odds ratio for narcissistic entrepreneurs preferred external funding sources, there was no significant relationship between funding preference and openness to experience, Based on the outcomes, ***hypothesis 8a, the null hypothesis (H_{8a}) rejected, and the alternative hypothesis (H_{18a}) supported.*** Among narcissistic UK entrepreneurs, openness to experience significantly influences the preference for external funding. There is a significant association between narcissism and a preference for funding, and they are more inclined to prefer external. This relationship increases with openness to experiences, as indicated by the p-values from H7 and H_{8a}.

6.26 Finding of Hypothesis 8a (H_{8a})

Based on the statistical outcome of Hypothesis 7 (H₇), the findings indicate that narcissistic entrepreneurs' preference for external funding differs from the existing theory on narcissism and resource acquisition. This is primarily because they are high-risk takers and may speak highly of their capabilities and competencies. Hypothesis 8 (H_{8a}) then extends this further to conclude whether there is a similar preference for external funding where entrepreneurs are open to experience. The findings of hypothesis 8 (H_{8a}) showed that the significance of narcissism improved with the relationship of openness to experience. First, we will examine the relationship between openness and the odds of preference for internal or external funding. For entrepreneurs open to experience, there was no statistically significant relationship between the preference for external funding and external funding ($p=0.628 > 0.05$), suggesting they may prefer internal funding over external funding. It was noted that the odds of preference were more aligned with internal funding (**Exp(B) = 0.980**). Overall, narcissism remains significant with **p=0.041 <0.05**. Moreover, likely to prefer external funding **Exp(B) 1.047**, which means that they are likely to prefer funding their entities using equity and debts; interestingly, from the statistical outcome of hypothesis 7(H₇) the p-value outcome was **p=0.047< 0.05**, with the relationship of openness and experience the p-value now shows a statistical significance **p=0.041 <0.05**, this evidence that the p-value changes with a more significant relationship between narcissism and funding preference when moderated by openness to experience. The table below summarises the statistical comparison between the two hypotheses and the outcomes amongst 250 entrepreneurs within the UK.

Table 71 Summary of Hypothesis seven (H7) and Hypothesis eight (H8a)

Narcissism -NPI-	Statistical results Narcissism	Odd / Likelihood Funding Preference (0- Internal funding,1- External funding)
<u>Hypothesis 7</u> <ul style="list-style-type: none"> — H₀₇: Narcissism does not significantly influence the preference for internal versus external funding amongst UK entrepreneurs (REJECTED) — H₁₇: Narcissism significantly influences the preference for internal versus external funding amongst UK entrepreneurs (SUPPORTED) 	p=0.047< 0.05	Exp (B)= 1.043 1- External funding

<ul style="list-style-type: none"> — H_{08a}: Among narcissistic UK entrepreneurs, openness to experience does not significantly influence preference for external funding (REJECTED). — H_{18a}: Among narcissistic UK entrepreneurs, openness to experience significantly influences preference for external funding (SUPPORTED). 	Narc , $p=0.041 <0.05$ Open , $p= 0.628 >0.05$	Exp(B) =1.047 1-External funding Exp(B) =0.980 0-Internal funding

Based on the Table 63 summary above, it can be noted that openness to experience increased the statistical significance between narcissism amongst UK entrepreneurs and preference for external funding, with a reduction in the P value further below 0.05 and an increase in the Odds of the narcissistic entrepreneurs preferring external funding '1'. The previous research findings hypothesis 1 shows a positive association with openness/intellect and narcissism, and a positive association with extraversion (social dominance). Therefore, narcissism's preference for external funding increased with intellect and creativity. Limited research looks at the relationship between openness to experience and narcissism in resource acquisition entrepreneurial activities.

- **H_{08a}:** Among narcissistic UK entrepreneurs, openness to experience does not significantly influence preference for external funding (**NOT REJECTED**).
- **H_{18a}:** Among narcissistic UK entrepreneurs, openness to experience significantly influences preference for external funding (**NOT SUPPORTED**).

6.27 Analysis of Hypothesis 8b (H_{8b})

Hypothesis 8b (H_{8b}) will be analysed using the ***Binary Logistic Regression in (SPSS)***, to analyse the following proposed null and alternative hypotheses:

- **H_{08b}:** Among narcissistic UK entrepreneurs, extraversion does not significantly influence preference for external funding.

- **H_{18b}:** Among narcissistic UK entrepreneurs, extraversion significantly influences preference for external funding.

The hypothesis will be analysed using Binary Logistics Regression (**SPSS**), *in which the dependent variable takes either 0 or 1 value.*

The probability of observing a 0 or 1 depends on one or more explanatory variables.

The below equation is the operationalisation of the equation.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + u_i$$

With a binary dependent variable, Y_i is called the linear probability model.

$$E(Y|X_1, X_2, \dots, X_k) = P(Y = 1|X_1, X_2, \dots, X_k)$$

Whereby.

$$P(Y = 1|X_1, X_2, \dots, X_k) = \beta_0 + \beta_1 + X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

$$\text{logit}(P(Y=1)) = \beta_0 + \beta_1(\text{Narcissism}) + \beta_2(\text{Extraversion}) + \dots + u_i$$

Y is the dependent variable, which measures UK entrepreneurs' preference for the source of funding, Internal or external.

UK entrepreneurs were asked which funding source they prefer internal or external funding.

The choice is Dichotomous and based on a binary logistics group of 0 and 1.

X: is the independent variables: Narcissism, and Extraversion

Table 72 Summary of Hypothesis Eight (H8b) variable X and dichotomous coding

Dependent Variable Encoding	
Original Value	Internal Value
Internal source of funding, personal funds, family and friends	0
External source of funding, bank loans, equity from investors	1

Table 73 Hypothesis Eight (H8b) case processing for sample

Case Processing Summary			
Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	250	100.0
	Missing Cases	0	0.0
	Total	250	100.0
Unselected Cases		0	0.0
Total		250	100.0
a. If weight is in effect, see classification table for the total number of cases.			

The logistic regression will produce an equation that can be used to estimate the probability of preferring internal versus external funding using the narcissism scale. Therefore, the two blocks from the statistical outcome will be compared to include the independent variable.

Block 0: Beginning Block

Table 74 Summary of hypothesis eight (H8b), dichotomous Variable X, preference for funding block (Beginning Block)

Classification Table^{a,b}

Observed			Predicted		
			FUNDING PREFERENCE		Percentage Correct
			Internal source	External source	
Step 0	FUNDING PREFERENCE	Internal source	210	0	100
		External source	40	0	0
	Overall Percentage				84
a. Constant is included in the model.					
b. The cut value is .500					

**Internal source of funding, personal funds, family and friends*

**External source of funding, bank loans, equity from investors*

Block 1: Method =Enter

Table 75 Summary of hypothesis eight (H8b), dichotomous Variable X, preference for funding block

Classification Tables					
Observed			Predicted		
			FUNDING PREFERENCE		Percentage Correct
			Internal source	External source	
Step 1	FUNDING PREFERENCE	Internal source	210	0	100
		External source	40	0	0
	Overall Percentage				84
a. The cut value is .500					

84% of individuals were classified using the Null model, and 100% were classified as internal funding. The whole model is then tested using the likelihood ratio (LR) test to determine whether it is significant ($p\text{-value} < 0.05$) relative to the null model in the **Omnibus Tests of Model Coefficients**.

Table 76 Omnibus Tests of Model Coefficients

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	5.321	2	0.070
	Block	5.321	2	0.070
	Model	5.321	2	0.070

The model was statistically insignificant when compared to the null model.

$$X^2 (2, N=250) = 5.321, P=0.070 > 0.05$$

Table 77 Hypothesis eight(H8b), Model Summary

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	214.514 ^a	0.021	0.036
a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.			

The Nagelkerke square value, R, is 0.036, which is 3.6%; R² is 0.021, which is 2.1%. Therefore, the model explains 3.6% and 2.1% of the variance in the dependent variable, respectively.

Table 78 Hosmer and Lemeshow Test

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	17.507	8	0.025

The Hosmer and Lemeshow test are significant, with P= 0.025 < 0.05. Although the Hosmer–Lemeshow test indicated a statistically significant result (p = 0.025), suggesting some deviation from perfect fit, this is primarily because it is not ideal for large samples (250). Other diagnostic measures indicated the model performed reasonably well. Therefore, while the model may not perfectly represent the data, it provides a useful framework for understanding the key predictors of the outcome. From Hypothesis 7, the Hosmer and Lemeshow test is significant, with P 0.3178 > 0.05, a perfect fit with narcissism as the predictor and as the main predictor being examined within the model. This further supports and demonstrates the relationship in the

statistical outcome when comparing narcissism, extraversion and the relation with preference for funding.

Variables in the Equation								
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)
							Lower	Upper
Step 1 ^a	NARCISSISM2	0.051	0.022	5.129	1	0.024	1.052	1.007 1.099
	EXTRAVERSION	-0.079	0.068	1.346	1	0.246	0.924	0.808 1.056
	Constant	-2.263	1.820	1.545	1	0.214	0.104	

a. Variable(s) entered on step 1: NARCISSISM2, EXTRAVERSION.

The odds ratio for narcissism and the dependent variable is 1.052 for every unit increase in Narcissism, so the probability of preference for external funding increases with the relationship of extraversion. Therefore, UK narcissist entrepreneurs are 1.052 more likely to prefer external funding, coded as '1' and Internal funding coded as '0'. Narcissism is statistically significant and increases with the relationship of extraversion in consideration of internal and external funding preference, with **p=0.024 <0.05**. Extraversion with a **p=0.246> 0.05** means the relationship between extraversion and the dependent variable is insignificant as the p-value is greater than 0.05, and the odds ratio is 0.924. The odds ratio for narcissism and extraversion to experience are; **Exp(B) 1.052, and 0.924** respectively; based on the results, narcissism was statistically significant, and the odds ratio for narcissistic entrepreneurs preferred external funding sources, there was no significant relationship between funding preference and extraversion, Based on the outcomes, ***hypothesis 8b, the null hypothesis (H_{08b}) rejected, and the alternative hypothesis (H_{18b}) supported.*** Among narcissistic UK entrepreneurs, extraversion significantly influences the preference for external funding. There is a significant association between narcissism and preference for funding, and they are more inclined to prefer external funding. This relationship increases with extraversion when examining the p-value of narcissism from **H₇** and **H_{8b}** empirical results.

6.28 Finding of Hypothesis 8b (H_{8b})

The findings of hypothesis 8 (H_{8b}) showed that the significance of narcissism improved with the relationship of extraversion. First, we will examine the relationship between openness and the odds of preference for internal or external funding. For entrepreneurs extraverted, there was no statistically significant relationship between the preference for funding, $p=0.246 > 0.05$, and they may prefer internal funding over external funding. It was noted that the odds of preference were more aligned with internal funding **Exp(B) 0.924**. Overall, narcissism remains significant with $p=0.024 < 0.05$. Moreover, likely to prefer external funding **Exp(B) 1.052**, which means that they are likely to prefer funding their entities using equity and debts; interestingly, from the statistical outcome of hypothesis 7(H₇) the p-value outcome was $p=0.047 < 0.05$, with the relationship of extraversion, the p-value now shows a statistical significance $p=0.024 < 0.05$, this evidence that the p-value changes with a more significant relationship between narcissism and funding preference influenced by the relationship with extraversion. The table below summarises the statistical comparison between the two hypotheses and the outcomes amongst 250 entrepreneurs within the UK.

Table 79 Summary of Hypothesis seven (H7), Hypothesis eight (H8a) and Hypothesis nine (H8b)

Narcissism -NPI-	Statistical results Narcissism	Odd / Likelihood Funding Preference (0- Internal funding,1- External funding)
<p>Hypothesis 7</p> <ul style="list-style-type: none"> — H₀₇: Narcissism does not significantly influence the preference for internal versus external funding amongst UK entrepreneurs (REJECTED) — H₁₇: Narcissism significantly influences the preference for internal versus external funding amongst UK entrepreneurs (SUPPORTED) 	<p>Narc, $p=0.047 < 0.05$</p>	<p>Exp (B)= 1.043 1-External funding</p>
<p>Hypothesis 8a</p> <ul style="list-style-type: none"> — H_{08a}: Among narcissistic UK entrepreneurs, openness to experience does not significantly influence preference for external funding, (REJECTED). — H_{18a}: Among narcissistic UK entrepreneurs, openness to experience 	<p>Narc, $p=0.041 < 0.05$ Open, $p= 0.628 > 0.05$</p>	<p>Exp(B) =1.047 1-External funding Exp(B) =0.980 0-External funding</p>

significantly influences preference for external funding (SUPPORTED).		
Hypothesis 8b <ul style="list-style-type: none"> — H_{08b}: Amongst narcissistic UK entrepreneurs, extraversion does not significantly influence preference for external funding, (REJECTED). — H_{18b}: Amongst narcissistic UK entrepreneurs, extraversion significantly influences preference for external funding, (SUPPORTED) 	Narc, p=0.024 <0.05 Extra, p=0.246 >0.05	Exp(B) =1.052 1-External funding Exp(B) =0.924 0- Internal funding

0

These findings contribute to the literature as the narcissist is known for being overconfident, dominant, and high need for rewards.

- **H_{08b}:** Among narcissistic UK entrepreneurs, extraversion does not significantly influence preference for external funding (**REJECTED**).
- **H_{18b}:** Among narcissistic UK entrepreneurs, extraversion significantly influences preference for external funding (**SUPPORTED**).

Narcissists may over-emphasise their potential rather than reality and theory. Within the research, Hypothesis 9 (H9) will further examine this relationship by analysing the results from 160 entrepreneurs among the 250 who were engaged with their financial success in their businesses. Based on the nature of the narcissist, it was essential to ask whether they had disclosed whether they were successful in receiving external funding on the first attempt.

6.29 Analysis of Hypothesis H₉

Hypothesis 9 (H₉) will be analysed using the ***Binary Logistic Regression in (SPSS)***, to analyse the following proposed null and alternative hypotheses:

- **H₀₉:** Personality traits (narcissism, openness to experience, and extraversion) do not significantly influence the likelihood of successfully obtaining external funding amongst UK entrepreneurs.

- **H₁₉:** Personality traits (narcissism, openness to experience, and extraversion) significantly influence the likelihood of successfully obtaining external funding amongst UK entrepreneurs.

Hypothesis 9 (H₉) will be analysed using Binary Logistic Regression in SPSS, ***which looks at the association between UK entrepreneurs' personality, narcissism, openness to experience and extraversion in successfully obtaining funding.*** This hypothesis addresses.

The hypothesis will be analysed using Binary Logistic Regression (SPSS), in which the dependent variable takes a value ***of either 0 or 1.***

In any case, the probability of observing a 0 or 1 is treated as dependent on one or more explanatory variables.

The below equation is the operationalisation of the equation.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + u_i$$

With a binary dependent variable, Y_i is called the linear probability model.

$$E(Y|X_1, X_2, \dots, X_k) = P(Y = 1|X_1, X_2, \dots, X_k)$$

Whereby.

$$P(Y = 1|X_1, X_2, \dots, X_k) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

$$\text{logit}(P(Y=1)) = \beta_0 + \beta_1(\text{Narcissism}) + \beta_2(\text{Openness}) + \beta_3(\text{Extraversion}) + \dots + u_i$$

Y: is the dependent variable, UK entrepreneurs' success in obtaining external funding

UK entrepreneurs were asked whether they successfully obtained external funding on their first attempt. The answer is yes or no, which is Dichotomous and based on a binary logistic group of 0 and 1.

X: is the independent variables: Narcissism, Openness to experience and Extraversion

Table 80 Summary of Hypothesis Nine (H_9) variable X , and dichotomous coding

Dependent Variable Encoding	
Original Value	Internal Value
Yes	0
No	1

The 250 entrepreneurs were asked whether they had received external funding and whether they had been successful at the first attempt. Only 160 answered, and the remaining 90 were unsure whether they had received funding.

Table 81 Hypothesis Nine (H_9) case processing for the sample

Case Processing Summary			
Unweighted Cases ^a		N	Per cent
Selected Cases	Included in Analysis	160	100
	Missing Cases	0	0
	Total	160	100
Unselected Cases		0	0
Total		160	100
a. If weight is in effect, see the classification table for the total number of cases.			

Again, of the 250 entrepreneurs, 90 were unsure whether they had received external funding and may have preferred to fund their businesses internally. These 90 entrepreneurs were excluded, leaving 160 who answered yes or no to being successful in receiving external funding.

Block 0: Beginning Block

Table 82 Summary of hypothesis nine (H_9), dichotomous Variable X , success in obtaining external funding block (Beginning Block)

Classification Table ^{a,b}							
	Observed	Predicted					
		SUCCESSFUL IN RECEIVING FEXTERNAL_FUNDING AT FIRST ATTEMPT		Percentage	Correct		
		Yes	No				
Step 0	SUCCESSFUL IN RECEIVING FEXTERNAL_FUNDING AT FIRST ATTEMPT	Yes	0	80	0		
	No	0	80	100			
	Overall Percentage				50		
a. Constant is included in the model.							
b. The cut value is .500							

The analysis included 160 respondents. The model predicts that all the entrepreneurs who participated in the study will prefer internal funding, with an overall prediction rate of 50%.

Block 1: Method =Enter

Table 83 Summary of hypothesis nine (H9), dichotomous Variable X, success in external funding block

Classification Table ^s					
	Observed	Predicted			
		SUCCESSFUL IN RECEIVING FEXTERNAL_FUNDING AT FIRST ATTEMPT		Percenta	ge
		Yes	No	Correct	
Step 1	SUCCESSFUL IN RECEIVING FEXTERNAL_FUNDING AT FIRST ATTEMPT	Yes	44	36	55
	No	31	49	61.3	

Overall Percentage			58.1
a. The cut value is .500			

58.1% of entrepreneurs were classified using the null '0' model, and 100% were classified as no. They were not successful on the first attempt. The complete model was then tested using the likelihood ratio (LR) insignificant (p-value > 0.05) on the null hypothesis of the **Omnibus Tests of Model Coefficients**.

Table 84 Omnibus Tests of Model Coefficients

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	3.854	3	0.278
	Block	3.854	3	0.278
	Model	3.854	3	0.278

The model was statistically insignificant.

$$X^2 (3, N=160) = 3.854, P=0.278 > 0.05$$

Table 85 Hypothesis Nine (H_9), Model Summary

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	217.953 ^a	0.024	0.032
a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.			

The Nagelkerke square value, R, is 0.032, 3.2%. R² is 0.024, which is 2.4%. Therefore, the model explains 3.2% and 2.4% of the variance in the dependent variable, respectively.

Table 86 Hosmer and Lemeshow Test

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	3.788	8	0.876

The Hosmer and Lemeshow test is insignificant, with $P = 0.876 > 0.005$

Table 87 Hypothesis nine (H9) and variable outcome,

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	NARCISSISM-NPI40	-0.024	0.022	1.183	1	0.277	0.976
	OPENNESS TO EXPERIENCE	-0.026	0.041	0.399	1	0.528	0.975
	EXTRAVERSION	-0.04	0.062	0.426	1	0.514	0.960
	Constant	3.306	1.798	3.381	1	0.066	27.286

a. Variable(s) entered on step 1: NARCISSISM- NPI40, OPENNESS TO EXPERIENCE, EXTRAVERSION.

Based on the binary equation of the dependent variable, entrepreneurs were asked whether they successfully received external financing at the first attempt, 'yes' or 'no'. The variable is therefore dichotomous between yes and no, with 'yes' being '0' and 'No' being '1'. Narcissism is statistically insignificant with a **p-value = 0.277 > 0.05**. Openness to experience is statistically insignificant to the dependent variable, **p-value = 0.528 > 0.05**, while extraversion is statistically insignificant to the dependent variable **p value = 0.514 > 0.05**. The odds ratios for narcissism, openness, and extraversion are $Exp(B) = 0.976$, 0.975 , and 0.960 , respectively. Based on the results, narcissism was not statistically significant, and the odds ratio for narcissistic entrepreneurs receiving external funding was 1.0. Openness to experience and extraversion were very similar, both insignificant, with odds ratios indicating that they successfully received external findings at the first attempt. There was no significant relationship between success in receiving external funding at the first attempt and being narcissistic, open to experience and extraverted. Based on the outcomes, based on the outcomes, **hypothesis 9**,

the null hypothesis (H_{09}) not rejected, and the alternative hypothesis (H_{19}) not supported.

There is an insignificant association between the relationships of obtaining external funding.

6.30 Findings of Hypothesis H_9

There is an insignificant relationship between narcissism and successful external funding; the odds ratios for narcissism, openness, and extraversion are $Exp(B) = 0.976, 0.975$, and 0.96, respectively, which favours internal funding. This thesis examines the narcissism of NPI40 and the Big Five Personality (BFI), the personalities of UK entrepreneurs, and how these factors influence resource acquisition and financial decisions for SMEs. From the literature, there is the implication that narcissistic entrepreneurs do have some negative impact on the environment that they operate in and are destructive to SMEs; however, the literature states that there are some positive benefits of personality, such as narcissism, openness to experience and extraversion when evaluating the resource acquisition (Brahmana & Kontesa, 2023). These findings contribute to the literature that though narcissists are open to experience, extraverted, and have preferences for external funding, there is no significant relationship. The analysis and the following results were based on the following.

- **H_{09} :** Personality traits (narcissism, openness to experience, and extraversion) do not significantly influence the likelihood of successfully obtaining external funding amongst UK entrepreneurs (**NOT REJECTED**).
- **H_{19} :** Personality traits (narcissism, openness to experience, and extraversion) significantly influence the likelihood of successfully obtaining external funding amongst UK entrepreneurs (**NOT SUPPORTED**).

Therefore, these research findings suggest that self-inflated ego, intellect, creativity, and social dominance may influence stakeholders; however, this may not play a significant role in the success of obtaining funding in relation to venture capitalists, angel investors, and bank lenders, and may call for further research amongst educators and investors. Hypothesis 10 will be introduced to assess socio-economic factors, in addition to personality, including age, gender, educational level, ethnicity, entrepreneurial experience, business Size (number of employees), and industry sector. This would make further contributions to the field of entrepreneurial finance and to understanding how this relationship aligns with successfully securing external funding.

6.31 Analysis of Hypothesis H₁₀

Hypothesis 10 (H₁₀) will be analysed using the **Binary Logistic Regression in (SPSS)**, to analyse the following proposed null and alternative hypotheses:

- **H₀₁₀**: Personality traits (narcissism, openness to experience, extraversion) have no significant effect on funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity, business experience, business size and industry).
- **H₁₁₀**: Personality traits (narcissism, openness to experience, extraversion) significantly affect funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity, business experience, business size and industry).

The hypothesis will be analysed using Binary Logistics Regression (**SPSS**), *in which the dependent variable takes either 0 or 1 value.*

The probability of observing a 0 or 1 depends on one or more explanatory variables.

The below equation is the operationalisation of the equation.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} + u_i$$

With a binary dependent variable, Y_i is called the linear probability model.

$$E(Y|X_1, X_2, \dots, X_k) = P(Y = 1|X_1, X_2, \dots, X_k)$$

Whereby.

$$P(Y = 1|X_1, X_2, \dots, X_k) = \beta_0 + \beta_1 + X_1 + \beta_2 X_2 + \dots + \beta_k X_k$$

$$\begin{aligned} \text{logit}(P(Y=1)) = & \beta_0 + \beta_1(\text{Narcissism}) + \beta_2(\text{Openness}) + \beta_3(\text{Extraversion}) + \beta_4(\text{Age}) + \beta_5 \\ & (\text{Gender}) + \beta_6(\text{Education}) + \beta_7(\text{Ethnicity}) + \beta_8(\text{Experience}) + \beta_9(\text{Business Size}) + \beta_{10} \\ & (\text{Industry}) + u_i \end{aligned}$$

Y: is the dependent variable, UK entrepreneurs' success in obtaining external funding

UK entrepreneurs were asked whether they successfully obtained external funding at the first attempt. The answer is yes or no, which is Dichotomous and based on a binary logistic group of 0 and 1.

X: is the independent variables: Narcissism, Openness to experience, Extraversion, Age, Gender, Education, Ethnicity, Experience, Business Size and Industry.

Table 88 Summary of Hypothesis Ten (H10) variable X, and dichotomous coding

Dependent Variable Encoding	
Original Value	Internal Value
Yes	0
No	1

The 250 entrepreneurs were asked whether they had received external funding and whether they had been successful at the first attempt. Only 160 answered, and the remaining 90 were not aware of whether they had received funding.

Table 89 Hypothesis Ten (H10) case processing for sample

Case Processing Summary			
Unweighted Cases ^a		N	Per cent
Selected Cases	Included in Analysis	160	100
	Missing Cases	0	0
	Total	160	100
Unselected Cases		0	0
Total		160	100

a. If weight is in effect, see the classification table for the total number of cases.

Again, of the 250 entrepreneurs, 90 were unsure whether they had received external funding and may have preferred to fund their businesses internally. These 90 entrepreneurs were

excluded, leaving 160 who answered yes or no to being successful in receiving external funding.

Block 0: Beginning Block

Table 90 Summary of hypothesis Ten (H10), dichotomous Variable X, success for external funding block (Beginning Block)

Classification Table ^{a,b}							
	Observed	Predicted			Percentage Correct		
		SUCCESSFUL IN RECEIVING FEXTERNAL_FUNDING AT FIRST ATTEMPT					
		Yes	No				
Step 0	SUCCESSFUL IN RECEIVING FEXTERNAL_FUNDING AT FIRST ATTEMPT	Yes	0	80	0		
	No	0	80	100			
	Overall Percentage				50		
a. Constant is included in the model.							
b. The cut value is .500							

Block 1: Method =Enter

Table 91 Summary of hypothesis Ten (H10), dichotomous Variable X, success in obtaining external funding for the funding block

Observed		Classification Table ^a				
		Predicted		Percentage Correct		
		SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt in acquiring financing?				
		Yes		No		
Step 1	SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt in acquiring financing?	Yes	52	28	65.0	
		No	25	55	68.8	
Overall Percentage					66.9	
a. The cut value is .500						

66.9% of entrepreneurs were classified using the null '0' model, and 100% were classified as no. They were not successful on the first attempt. The complete model was then tested using the likelihood ratio (LR). This means the model fits significantly better than the null model (predictors together significantly improve the prediction of the dependent variable).

Tests of Model Coefficients.

Table 92 Omnibus Tests of Model Coefficients

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	25.726	10	0.004
	Block	25.726	10	0.004
	Model	25.726	10	0.004

$$X^2 (10, N=160) = 25.726, P=0.004 < 0.05$$

The model was statistically significant.

Table 93 Hypothesis Ten (H_{10}), Model Summary

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	196.081 ^a	0.149	0.198

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

The Nagelkerke square value, R, is 0.198, 19.8%. R^2 is 0.149, which is 14.9%. Therefore, the model explains 19.8% and 14.9% of the variance in the dependent variable, respectively.

Table 94 Hypothesis Ten (H10) and variable outcome,

Variables in the Equation								
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)
								Lower
Step 1 ^a	NARCISSISM2	-0.033	0.026	1.563	1	0.211	0.968	0.919
	OPENNESS TO EXPERIENCE	-0.029	0.046	0.403	1	0.525	0.971	0.888
	EXTRAVERSION	-0.083	0.070	1.418	1	0.234	0.920	0.803
	AGE - What is your age?	0.212	0.245	0.752	1	0.386	1.236	0.765
	BIOLOGICAL GENDER - What is your biological gender?	-0.321	0.330	0.948	1	0.330	0.726	0.380
	EDUCATION - What is your highest level of Education?	0.012	0.090	0.017	1	0.895	1.012	0.848
	ETHNICITY - What is your ethnicity?	0.115	0.047	5.838	1	0.016	1.121	1.022
	OWNER_NO_YEAR_S_EXPERIENCE - How many years of experience have you/has the owner had managing or owning a business, including this business?	-0.167	0.128	1.708	1	0.191	0.846	0.659
	NO_OF_EMPLOYEES - How many people, including you, work in this business?	-0.657	0.278	5.590	1	0.018	0.518	0.301
	INDUSTRY - What industry most related to the enterprise?	0.090	0.038	5.504	1	0.019	1.094	1.015
Constant		5.383	2.357	5.215	1	0.022	217.683	

Education?, ETHNICITY - What is your ethnicity?, OWNER_NO_YEARS_EXPERIENCE - How many years of experience have you/has the owner had managing or owning a business, including this business?, NO_OF_EMPLOYEES - How many people , including you, work in this business?, INDUSTRY - What industry most related to the enterprise? .

Based on the binary equation of the dependent variable, entrepreneurs were asked whether they successfully received external financing at the first attempt, 'yes 'or 'no'. The variable is therefore dichotomous between yes and no, with 'yes' being '0' and 'No' being '1'. The statistical analysis examines both the personality and the socioeconomic factors and their impact on successfully obtaining external funding.

The discussion will now examine personality and the likelihood of successfully obtaining external funding. **Narcissism** is statistically insignificant with a **p-value = 0.211>0.05**. **Openness to experience** is not statistically significant for the dependent variable, **p-value = 0.525 > 0.05**. **Extraversion** is statistically insignificant to the dependent variable **p value = 0.234 > 0.05**. The odds ratio for narcissism, openness and extraversion is $\text{Exp}(B)$ 0.968, 0.971 and 0.920, respectively. Based on the results, personalities (narcissism, openness to experience, and extraversion) were statistically insignificant when controlled by socioeconomic variables, and the odds ratio for narcissistic entrepreneurs being successful in receiving external funding was yes. Openness to experience and extraversion were very similar, both insignificant, with odds ratios indicating that they were most likely to secure external funding. There was no significant relationship between success in receiving external funding at the first attempt and being narcissistic, open to experience and extraverted when controlled for socio-economic factors.

For socioeconomic factors, **Age**, statistically insignificant **p- value = 0.386>0.05**, and **does** not influence successful obtaining external funding, however, were $\text{Exp}(1.236)$ more in alignment with not being successful with external funding. **Gender** is statistically insignificant **p-value = 0.330 > 0.05** and therefore based on the statistical outcome there is no significant relationship in successfully obtaining external funding. The odds ratio is closer to '0' and is in the odds of yes, in successfully obtaining external funding. **Education** is statistically insignificant with a **p-value=0.895 >0.05**, and therefore, there is no significant relationship between education and successfully obtaining external funding. The odds ratio $\text{Exp}(1.012)$ was more in alignment with not being successful in external funding '1'. **Ethnicity**, statistically significant with a **p-value =0.016<0.05**, and influences the outcome of successfully obtaining

external funding, an odds ratio in favour of not successfully in obtaining funding. **Experience** is statistically insignificant with a **p-value =0.191>0.05**; there is no significant relationship between experience and successful obtaining external funding. The odds ratio Exp (0.846) which is the likelihood with being successful at obtaining external funding. **Business size** (no of employees), statistically significant with a **p-value =0.018<0.05**, there is a significant relationship between business size (no. of employees) and successfully obtaining external funding, additionally, **industry** was also statistically significant **p-value =0.019<0.05**, with Exp (0.528) and Exp (1.094) respectively. Based on the statistical outcomes, **hypothesis 10, the null hypothesis (H_{010}) not rejected, and the alternative hypothesis (H_{110}) is not supported.** There is an insignificant association between the relationships of obtaining external funding.

6.32 Findings of Hypothesis H_{10}

Controlling for socio-economic variables helps to contribute to the final statistical model and research findings on the effect of personality traits (narcissism, openness, and extraversion) on the likelihood of successfully obtaining external funding among UK entrepreneurs. Some results indicate that personality traits, such as narcissism. The results indicate that **personality traits**—narcissism ($p=0.211$), openness to experience ($p=0.525$), and extraversion ($p=0.234$)—are **not statistically significant** predictors of funding success when controlling for socio-economic factors. Their odds ratios ($Exp(B) = 0.968, 0.971, \text{ and } 0.920$, respectively) suggest minimal influence on the likelihood of securing funding. Among **socio-economic variables**, three factors emerged as **significant predictors**. **Ethnicity** ($p=0.016<0.05$): Significant influence on funding outcomes. **Business Size** ($p = 0.018< 0.05$): Larger firms with no of employees being the measure, were more likely to succeed in obtaining funding. **Type** ($p=0.019<0.05$): Certain industries had higher odds of funding success. Other variables — age, gender, education, ethnicity and experience — were statistically insignificant ($p > 0.05$) and therefore did not significantly affect the likelihood of obtaining funding. Although the overall model was statistically significant, the key independent variables of interest — narcissism, openness to experience, and extraversion — were **not** significant predictors of funding success. Therefore, the findings of hypothesis 10 is as follows.

- **H_{010}** : Personality traits (narcissism, openness to experience, extraversion) have no significant effect on funding success after controlling for socio-economic

characteristics (age, gender, education, ethnicity, business experience , business size and industry) (**NOT REJECTED**).

- **H₀₁₀**: Personality traits (narcissism, openness to experience, extraversion) significantly affect funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity , business experience , business size and industry) (**NOT SUPPORTED**).

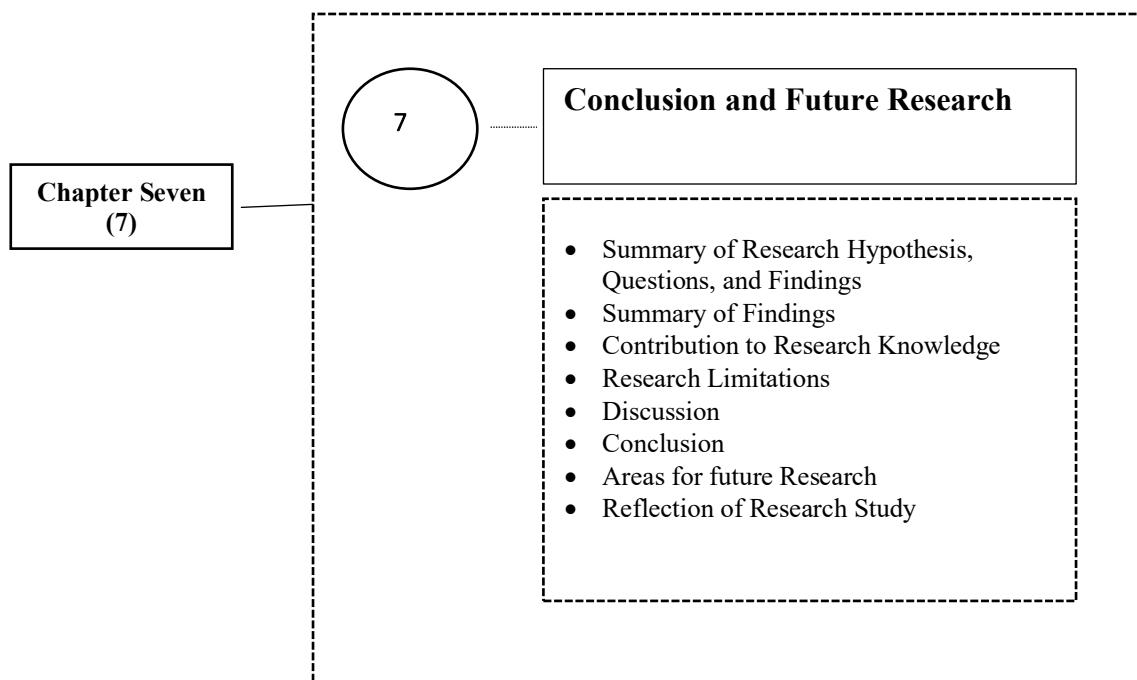
However, **ethnicity, business size, and industry sector** do play a significant role in determining funding success. In the research context of external funding for entrepreneurship and SMEs, these factors are critical structural determinants of funding outcomes. Prior research shows that entrepreneurs from ethnic minority backgrounds often face systemic barriers to accessing external finance, including information asymmetries, weaker network ties to investors, and potential implicit bias in credit and equity markets. Business size also influences funding success, as larger SMEs typically have more formalised governance structures, clearer financial track records, and lower perceived risk, making them more attractive to lenders and investors than micro and early-stage ventures. The industry sector also plays a decisive role: firms operating in high-growth or technology-intensive sectors are more likely to secure equity finance, while those in traditional or low-margin industries tend to rely on debt or informal funding sources. Analysing these dimensions together enables PhD-level research to move beyond individual entrepreneur characteristics and foreground how structural and contextual factors interact to influence the accessibility, allocation, and inequality of external funding within entrepreneurial finance ecosystems.

CHAPTER SEVEN (7) CONCLUSION AND FUTURE RESEARCH

7.1 Introduction

This chapter will provide a conclusion, research summary, and reflection on the research study by discussing the overall hypothesis, reflections on the study, the conclusion, contributions to knowledge, research limitations, and an agenda for future research in the field of entrepreneurship, personality, and entrepreneurial finance amongst SMEs. The section aims to provide a single, overall summary of the research study, drawing on theoretical studies within the field to discuss the findings and to contribute to knowledge and the field of study. The study focuses on the personalities of entrepreneurs in SMEs and their association with entrepreneurial finance decisions. The study was done within the United Kingdom (UK), and a quantitative approach was adopted. In previous chapters, the theoretical framework, in detail, identifies the research gap and formulates a hypothesis, followed by quantitative analysis using simple linear regression, multiple linear regression, and binary logistic regression. Figure 17 summarises this chapter.

Figure 17; Structure of Chapter Seven (7)



7.2 Summary of Research, Hypothesis, Questions and Findings

Table 84 below summarises the research hypothesis, questions, empirical results, findings, and analysis of the statistical results within the research. The tables also indicated the hypothesis results.

Table 95: Summary of Research Hypothesis and Findings

Hypothesis	Empirical Results	Findings& Analysis
Hypothesis 1 (H1): Null and Alternative <ul style="list-style-type: none"> — H₀₁: There is no significant association between narcissism and openness to experience among UK entrepreneurs. — H₁₁: There is a significant positive association between narcissism and openness to experience among UK entrepreneurs. 	<p>Hypothesis 1 (H₁) was analysed using simple linear regression to examine the association between narcissism and Openness to experience among 250 UK entrepreneurs.</p> $(\beta = 0.554, t = 5.206, p = <0.001 < 0.05)$	H ₀₁ : REJECTED H ₁₁ : SUPPORTED Null Hypothesis Rejected Alternative Hypothesis Supported
Hypothesis 2 (H2): Null and Alternative <ul style="list-style-type: none"> — H₀₂: There is no significant association between narcissism and conscientiousness among UK entrepreneurs. — H₁₂: There is a significant negative association between narcissism and conscientiousness among UK entrepreneurs. 	<p>Hypothesis 2 (H₂) was analysed using simple linear regression to examine the association between Narcissism and Conscientiousness among 250 UK entrepreneurs.</p> $(\beta = 0.196, t = 1.019, p = 0.309 > 0.05)$	H ₀₂ : NOT REJECTED H ₁₂ : NOT SUPPORTED Null Hypothesis Not Rejected Alternative Hypothesis Not Supported

Hypothesis 3 (H3): Null and Alternative <ul style="list-style-type: none"> — H₀₃: There is no significant association between narcissism and extraversion among UK entrepreneurs. — H₁₃: There is a significant positive association between narcissism and extraversion among UK entrepreneurs. 	Hypothesis 3 (H ₃) was analysed using simple linear regression, which examines the association between extraversion and narcissism among 250 UK entrepreneurs. $(\beta = 0.895, t = 5.207, p = <0.001 < 0.05)$	H ₀₃ : REJECTED H ₁₃ : SUPPORTED Null Hypothesis Rejected Alternative Hypothesis Supported
Hypothesis 4 (H4): Null and Alternative <ul style="list-style-type: none"> — H₀₄: There is no significant association between narcissism and agreeableness among UK entrepreneurs. — H₁₄: There is a significant negative association between narcissism and agreeableness among UK entrepreneurs. 	Hypothesis 4 (H ₄) was analysed using simple linear regression, which examines the association between agreeableness and narcissism among 250 UK entrepreneurs. $(\beta = 0.389, t = 2.502, p = 0.013 < 0.05)$	H ₀₄ : REJECTED H ₁₄ : SUPPORTED Null Hypothesis Rejected Alternative Hypothesis Supported
Hypothesis 5 (H5): Null and Alternative <ul style="list-style-type: none"> — H₀₅: There is no significant association between narcissism and neuroticism among UK entrepreneurs. — H₁₅: There is a significant negative association between narcissism and neuroticism among UK entrepreneurs. 	Hypothesis 5 (H ₅) was analysed using simple linear regression, which examines the association between neuroticism and narcissism among 250 UK entrepreneurs. $(\beta = -0.174, t = -1.189, p = 0.236 > 0.05)$	H ₀₅ : NOT REJECTED H ₁₅ : NOT SUPPORTED Null Hypothesis Not Rejected Alternative Hypothesis Not Supported

<p>Hypothesis 6 (H6): Null and Alternative</p> <ul style="list-style-type: none"> — H₀₆: There is no significant relationship between narcissism and the Big Five personality traits among UK entrepreneurs. — H₁₆: There is a significant relationship between narcissism and the Big Five personality traits among UK entrepreneurs. 	<p>Hypothesis 6 (H6) was analysed using multiple linear regression, which examines the association between Narcissism and the components of the Big Five personality traits among 250 UK entrepreneurs.</p> <p>F-statistics (df = 5, 244) = 10.167, p < 0.001 (p < 0.05)</p> <p>Openness [coef., $\beta = 0.409$, $p = <0.001$],</p> <p>Conscientiousness [coef., $\beta = -0.007$, $p = 0.974$]</p> <p>Extraversion [coef., $\beta = 0.668$, $p = <0.001$],</p> <p>Agreeableness [coef., $\beta = 0.198$, $p = 0.245$]</p> <p>Neuroticism [coef., $\beta = -0.421$, $p = 0.005$],</p>	<p>H₀₆: REJECTED</p> <p>H₁₆: SUPPORTED</p> <p>Null Hypothesis Rejected</p> <p>Alternative Hypothesis Supported</p>
<p>Hypothesis 7 (H7):Null and Alternative</p> <ul style="list-style-type: none"> — H₀₇: Narcissism does not significantly influence the preference for internal versus external funding among UK entrepreneurs. — H₁₇: Narcissism significantly influences the preference for internal versus external funding among UK entrepreneurs. 	<p>Hypothesis 7 (H7) was analysed using Binary Logistic Regression in SPSS, with the dependent variable dichotomous (preference between internal and external funding), taking values of 0 or 1, respectively.</p> <p>Omnibus Test; $\chi^2 (1, N=250) = 3.934$, $P=0.047<0.05$</p> <p>Narcissism; $P=0.047<0.05$</p> <p>Narcissism; $\text{Exp (B)}= 1.043$</p>	<p>H₀₇: REJECTED</p> <p>H₁₇: SUPPORTED</p> <p>Null Hypothesis Rejected</p> <p>Alternative Hypothesis Supported</p>
<p>Hypothesis 8a (H8a): Null and Alternative</p> <ul style="list-style-type: none"> — H_{08a}: Among narcissistic UK entrepreneurs, openness to experience does not significantly influence preference for external funding. — H_{18a}: Among narcissistic UK entrepreneurs, openness to experience significantly influences preference for external funding. 	<p>Hypothesis 8a (H_{8a}) was analysed using the Binary Logistic Regression in SPSS, where the dependent variable was dichotomous, preference between internal funding and external funding dependent variable takes a value of either 0 or 1, respectively.</p> <p>Omnibus Test; $\chi^2 (2, N=250) = 4.169$, $P=0.124>0.05$</p> <p>Narcissism; $p=0.041 <0.05$.</p>	<p>H_{08a}: NOT REJECTED</p> <p>H_{18a}: NOT SUPPORTED</p> <p>Null Hypothesis Not Rejected</p> <p>Alternative Hypothesis Not Supported</p>

	<p>Openness to experience; $p=0.628 > 0.05$</p> <p>The odds ratio for narcissism and openness to experience are</p> <p>Narcissism; Exp(B) 1.047, - external funding</p> <p>Openness; Exp(B) 0.980 - internal funding</p>	
Hypothesis 8b (H8b): Null and Alternative	<p>Hypothesis 8a (H_{8a}) was analysed using the Binary Logistic Regression in SPSS, where the dependent variable was dichotomous, preference between internal funding and external funding, dependent variable takes a value of either 0 or 1, respectively.</p> <p>Omnibus Test; $X^2 (2, N=250) = 5.321, P=0.070 > 0.05$</p> <p>Narcissism; $p=0.024 < 0.05$.</p> <p>Extraversion; $p=0.246 > 0.05$</p> <p>The odds ratio for narcissism and extraversion are;</p> <p>Narcissism; Exp(B) 1.052, - external funding</p> <p>Extraversion; Exp(B) 0.924, - internal funding</p>	<p>H_{0b}: NOT REJECTED</p> <p>H_{1b}: NOT SUPPORTED</p> <p>Null Hypothesis Not Rejected</p> <p>Alternative Hypothesis Not Supported</p>
Hypothesis 9 (H9): Null and Alternative	<p>Hypothesis 9 (H9) was analysed among 160 UK entrepreneurs using Binary Logistic Regression in SPSS, where the dependent variable, UK entrepreneurs' success in obtaining external funding (yes/no), takes a value of 0 or 1, respectively.</p> <p>Omnibus Test; $X^2 (3, N=160) = 3.854, P=0.278 > 0.05$</p> <p>Narcissism $P=0.278 > 0.05$</p> <p>Openness, $p\text{-value} = 0.528 > 0.05$,</p> <p>Extraversion, $p\text{-value} = 0.514 > 0.05$.</p> <p>The odds ratios for narcissism, openness and extraversion are.</p> <p>Narcissism Exp(B) 0.976, - Yes, success</p> <p>Openness Exp(B) 0.975, - Yes success</p>	<p>H_{0b}: NOT REJECTED</p> <p>H_{1b}: NOT SUPPORTED</p> <p>Null Hypothesis Not Rejected</p> <p>Alternative Hypothesis Not Supported</p>

	Extraversion Exp(B) 0.960, - Yes Success	
Hypothesis 10 (H10): Null and Alternative <ul style="list-style-type: none"> — H₀₁₀: Personality traits (narcissism, openness to experience, extraversion) have no significant effect on funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity, business experience, business size and industry). — H₁₁₀: Personality traits (narcissism, openness to experience, extraversion) significantly affect funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity, business experience, business size and industry). 	<p>Hypothesis 10 (H10) was analysed among 160 UK entrepreneurs using Binary Logistic Regression in SPSS, where the dependent variable, UK entrepreneurs' success in obtaining external funding (yes/no), takes a value of <i>0 or 1, respectively.</i></p> <p>Omnibus Test; X² (10, N=160) = 25.726, P=0.004<0.05</p> <p>Narcissism; P=0.278>0.05</p> <p>Openness; p-value = 0.528 > 0.05,</p> <p>Extraversion; p-value = 0.514 > 0.05.</p> <p>Age; p-value = 0.386 > 0.05.</p> <p>Gender; p-value = 0.330 > 0.05.</p> <p>Education; p-value = 0.895 > 0.05.</p> <p>Ethnicity; p-value = 0.016 < 0.05.</p> <p>Business Experience; p-value = 0.191 < 0.05.</p> <p>Business Size, No of Employees; p-value = 0.018 < 0.05.</p> <p>Industry; p-value = 0.019 < 0.05.</p> <p>Narcissism Exp(B) 0.968, Openness Exp(B) 0.971, Extraversion Exp(B) 0.920, Age Exp(B) 1.236, Gender Exp(B) 0.726, Education Exp(B) 1.012, Ethnicity Exp(B) 1.121, Business Experience Exp(B) 0.846, Business Size Exp(B) 0.518, Industry Exp(B) 1.094.</p>	<p>H₀₁₀: NOT REJECTED</p> <p>H₁₁₀: NOT SUPPORTED</p> <p>Null Hypothesis Not Rejected</p> <p>Alternative Hypothesis Not Supported</p>

7.3 Summary of Findings

1. *Research Question one (1) (RQ₁): What is the relationship between narcissism and the Big Five personality components (Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism) amongst entrepreneurs in the UK?*

According to the theory, the research confirms that narcissism is significantly associated with openness to experience and extraversion and negatively associated with neuroticism. The findings on consciousness and agreement differed from the theory. Consciousness in the literature has yielded mixed results; this calls for further examination of the relationship between consciousness, personality, and narcissism. Agreeableness was found to be statistically significant among UK entrepreneurs, contradicting the existing literature and with implications for knowledge. Interestingly, there was a significant relationship between agreeableness and narcissism amongst UK entrepreneurs, and this points to the need for further theoretical exploration of the agreeableness of narcissistic entrepreneurs in the short run. When engaging customers and investors, narcissists can be agreeable in the first interaction about projects and ventures. However, later in the relationship, their disagreeable and destructive traits become evident to others. Therefore, there is the implication that traits such as openness to experience and extraversion may drive productivity in the short term. Over the long term, they may become increasingly unproductive and destructive due to their disagreeableness.

2. *Research Question Two (2) (RQ₂): What is the association between Personality (narcissism, openness to experience and extraversion) and preference for internal or external funding amongst UK entrepreneurs?*

Within the literature, it is observed that narcissists prefer internal funding to protect their fragile egos. They may also avoid external funding sources (Badloe & Janssen, 2023). Therefore, the pecking-order theory of internal funding over external funding would remain true in narcissism. This means the narcissist may engage with the pecking order theory, exploiting their resources through risk-taking, as the theory discusses. They convince family and friends to invest and engage in their business. However, empirical results indicate that narcissists prefer to fund their business using external funding rather than internal funding. This, therefore, suggests that the narcissist may seek to approach external investors, further validating the need to examine personalities in entrepreneurial finance and their impact on the resource-acquisition process. This has theoretical implications for the literature, concluding that narcissists prefer to seek funding from external sources and may require further evaluation in supporting investors in

making decisions based on their personalities. Venture capitalists and angel investors make such decisions, and how narcissism is supported through the resource-acquisition process. There is an association between narcissism and funding preferences, which was evident in the study of narcissism's preference for external funding, and there was a significant association based on statistical results. This means further work is needed to support investors in the selection process for external funding, as narcissists may present themselves due to overconfidence in their abilities, which can be destructive to businesses. Based on the previous research questions, the theoretical implication is that narcissism amongst UK entrepreneurs is significantly associated with a preference for external funding, which is interesting, as the literature has implied that narcissism would prefer internal funding. It was then examined to determine whether the big five traits, such as openness to experience and extraversion, would influence the relationship between narcissism. It was evident from the statistical results that openness to experience and extraversion improve the significance of the relationship between narcissism and a preference for external funding. However, openness to experience and preference for funding are statistically insignificant, whereas extraversion is statistically significant. Openness to experience and extraversion were more aligned with internal funding than with external funding. However, this means that those with social dominance, creativity, and intellect who prefer external funding increase the significance of the relationship between narcissism and this preference.

The theoretical implication confirms that narcissists are more extroverted and open to experience, which is associated with high creativity and intellect. This research contributes to the theory that narcissists are more creative and demonstrate high IQ. From the empirical data, the research found that narcissists prefer external funding, and these preferences were more statistically significant when influenced by openness to experience and extraversion. Therefore, Big Five traits such as openness to experience – creativity and intellect, and extraversion - assertiveness and social domination, influence the narcissism preference for external funding more strongly. However, it was important to note that openness to experience and extraversion were statistically insignificant in predicting the preference for funding and were more inclined to prefer internal funding. Addressing the research questions points to a research gap and contributes to knowledge. The fundamental finding is that narcissists may prefer external funding and approach venture capitalists, angel investors, and creditors

3. *Research Question Three (3) (RQ₃): Do personality traits (Narcissim, Openness to Experience and Extraversion) including socio economic factors influence success of obtaining external funding on first attempt?*

The research then seeks to examine the relationship between personality traits such as narcissism, openness to experience and extraversion, and how personality plays a role in influencing the success of obtaining external funding, and factoring in socio-economic factors influence such as age, gender, education, ethnicity, business experience, business size and industry. A fundamental part of the finding is that there is no significant relationship between narcissists being successful in obtaining funds. Therefore, there is a need to manage narcissistic, destructive behaviour to sustain SMEs formed by these personality traits, as they do portray the traits that are attractive to venture capitalists, investors and banks. The findings and Generation Z theory caution investors to be aware of narcissism within the investment decision process. Research Question Three explored whether selected personality traits—narcissism, openness to experience, and extraversion—together with socio-economic factors, influenced the likelihood of obtaining external funding on the first attempt. The findings indicate that personality traits did not play a meaningful role in determining first-attempt funding success. This suggests that individual dispositional characteristics may be less influential in early-stage funding outcomes within entrepreneurial literature. In contrast, several socio-economic factors emerged as influential.

Socio-economic and firm-level factors were more influential, with differences observed across ethnic groups, highlighting the continued relevance of social stratification and signalling theories in access to finance. Similarly, the influence of firm size and industry context suggests that funders prioritise organisational characteristics and industry risk profiles when making initial funding decisions. There was no significant relationship for age, gender, education, and business experience, which further implies that early-stage funding decisions may be driven less by human capital indicators and more by institutional norms and market-based assessments. Overall, the findings indicate that the success of obtaining external funding on the first attempt is better explained by structural and contextual factors than by personality traits, aligning the results more closely with resource-based and institutional theories than with personality-driven models of entrepreneurial finance.

7.4 Contribution of Research to Knowledge- Theoretical and Practical

Firstly, this research has significantly contributed to existing entrepreneurship literature and knowledge by developing a conceptual framework within the study of entrepreneurial finance and personality traits. The conceptual framework model has great potential in helping SMEs in the UK garner a more significant understanding of the founder's personality and how this navigates the financial resource acquisition process to drive the process of growth of the business.

Secondly, this study contributes to practice and the entrepreneurial industry. It will also bring insights for policymakers, such as steam houses, incubators, and accelerators, as it relates to identifying early-stage entrepreneurs' personalities and association with the entrepreneurial process, funding preference, and financial decision-making. This provided a valuable tool for assessing the entrepreneur's personality so investors and management can better support them to drive the success of their business in financial resource acquisition. Similar to personality tests such as the Briggs Personality Test used by organisations in assessing employees' personalities for the right fit for organisational culture and roles. The questions on the personality of entrepreneurs can provide helpful information to incubators, steam houses, mentors, and investors on how they support the entrepreneur.

Thirdly, the research contributes to practical and managerial perspectives by deepening the understanding of the entrepreneur's personality, which may provide excellent value to venture capitalists in VC investments. It is very clear from the literature on entrepreneurship that venture capitalists (VC) may benefit from increasing awareness of the role of the entrepreneur's personality traits in investment selection (Andreoli & ten Rouwelaar, 2024). Also, it is a valuable contribution to micro and early-stage entrepreneurs that can benefit from a better understanding of their personality along with the big five personality and narcissism within the modern generation, to better support them in managing their destructive side to gain mutual relationships and investment with venture capitalists (VC).

Fourthly, from the limited research that examines personality, there is not much literature that reviews the personality of the entrepreneur and finance. For the few studies noted, the primary examines students in business schools who are aspiring entrepreneurs; there is not much research that examines current entrepreneurs who have gone through the process of financial decisions and resource acquisition. Entrepreneurship has become increasingly important to academia, policymakers, industry practitioners, and government because of the role of SMEs in economic growth and job creation (Henrekson et al., 2010). Several academic

studies focus on entrepreneurship in SMEs and external factors; however, limited research focuses on the individual characteristics and personality traits of the entrepreneur.

Fifthly, the research contributes to the development of a conceptual framework that examines the productive traits of the narcissist, which are openness to experience and extraversion, which may positively influence entrepreneurship (Bailey et al., 2024). Traits such as assertiveness, overconfidence and intellect are instrumental in resource acquisition activities (Bailey et al., 2024). Findings also suggest that narcissistic personalities have a significant association with openness to experience (intellect) and extraversion (excitement and social networking). The narcissist is most likely to choose the internal source of funding to protect their fragile ego and to maintain control over their entities.(Bailey et al., 2024). Those with high extraversion and openness to experience may be more open to pursuing external funding sources, as they are more inclined to have social networks and enjoy the external process.

Sixthly, the study contributes to the entrepreneurial ecosystem in the UK. Entrepreneurship has evolved over many decades, and with more businesses going virtual and digital in the age of social media and modern technology, there are several unexplored concepts to discuss with Generation Z and future generations, where persona and personality play an essential role in followers and business success.

7.5 Research Limitations

The study has some limitations, which will be discussed in this section. Firstly, one of the limitations of the narcissism personality scale of the NPI 40 is a self-reporting measure. This means it relies on the participants' perceptions of themselves. As such, interpretations should consider potential biases or inaccuracies in self-reports. The limitation of the study points to the questionnaires being self-reported by the entrepreneurs themselves, and future research could focus on the reporting of their employees, venture investors, or family and friends.

Another limitation is the common bias method, where self-administered questionnaires/surveys examine the dependent and independent variables. The personality traits questionnaire usually reflects on this limitation; within the study, the survey was administered online to participants on Prolific, and extroverts are likely to agree with statements impulsively, while introverts tend to oppose. Thus, the individual differences of respondents may negatively affect their motivation to answer the questions accurately; however, the questions were designed so that respondents were not told directly that NPI and

BFI were being examined. To prevent respondents from selecting biased responses, the questionnaire entailed reversed questions.

Thirdly, there is a need in the literature to clarify the scoring of the NPI 40 scales. The research could examine further category scores of those UK entrepreneurs who fall high on the narcissism spectrum compared to those who are considered low. There are various debates in the literature between clinical and social psychological theories. The clinical theory states that there is no category of 'normal' and 'narcissist'. In contrast, the psychological theory states that there is a category of narcissism among those whose core 10 to 15 is generally found to be normal population, and NPI 40 scores found between 15 and 20 are said to be borderline. Those respondents who have NPI 40 equal to 20 and an excess are considered highly narcissistic personalities. The category data for those ranked 15 to 20 was analysed using SPSS, and there were no statistical changes in the empirical results. The hypothesis for those who are categorised as high in narcissism remained insignificant, with a p-value above 0.05. The research adopts the clinical theory of no variation between normal and narcissists; however, categorising Narcissism in business studies could further be examined these phenomena.

The research scope examines controlled variables such as (age, gender, education, experience, business size and industry), however, there is further room to examine the moderation of gender, education and industry within the context of narcissism, and how other external factors influence the success of obtaining external funding. This is a key limitation of the research, as there is a need for further examination of the scope of gender, education and industry into the relevance of narcissism and the influence on the entrepreneurs' relationship and the financial resources acquisition process. While this is relevant, it was not included in the scope of the research and is recognised as a limitation of this study. This was primarily not examined due to timelines, research scope and budget. However, this is recognised as a key phenomenon in the field of entrepreneurial finance. Gender plays an important role in the association with narcissism and the early start-up stage. Literature points to the implication that the female gender is associated with lower startup funding and lower narcissistic tendencies in comparison to the male (Burger et al., 2025). The research recognises the limitations of excluding external factors in the relationship of personality, and one such factor, recognising the literature, gender is an intricate relationship with narcissism and funding success in the context of high-growth startups (Burger et al., 2025).

7.6 Discussion

This section will discuss the findings of the research in clarity and depth, and analysis of the contributions to the research knowledge within the field of entrepreneurship. This section will further discuss the results of the research questions and directions. First, the research questions look at the **Research Question one (1) (RQ₁)**: *What is the relationship between narcissism and the Big Five personality components (Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism) among entrepreneurs in the United Kingdom?* This question aims to clarify how narcissistic traits coexist with or diverge from established personality dimensions within an entrepreneurial context. By examining these associations, the study intends to determine whether certain Big Five traits are more strongly linked to narcissistic tendencies and how these relationships might influence entrepreneurial behaviour, decision-making, and interpersonal dynamics. Understanding these patterns can contribute to a more nuanced psychological profile of UK entrepreneurs and offer insights into the personality factors that shape entrepreneurial success and challenges. Based on the findings, the research first examines the foundation theory of personality within the field of entrepreneurship and looks particularly at the Big Five Theory (BFI). Based on the findings, there were a significant association between narcissism and openness to experience. Openness to experience is the ability to remain creative and problem solve, using strong imagination. The research found commonalities between narcissism and high creativity and are one to new experience and phenomenon. The thesis therefore looks at how similar the traits of openness to experience to narcissism, and this drives the development of idea amongst entrepreneurs. Based on **Hypothesis One (1)**; the results showed statistical outcome ($\beta = 0.554$, $t = 5.206$, $p = <0.001 < 0.05$), is a positive determinant of Narcissism amongst UK entrepreneurs. There is a statistically significant relationship between openness to experience and narcissism.

Conscientiousness and narcissism represent two personality trait factors that can shape entrepreneurial behaviour in meaningful ways and contribute to the entrepreneurial process. There are traits of entrepreneurs that show commonalities between the two. Conscientiousness traits include being characterised by discipline, organisation, goal-orientation, and a strong sense of duty. Conscientiousness looks at planning, persistence, and the ability to follow through on business objectives. In contrast, narcissism is associated with self-enhancement, a strong desire for admiration, and a tendency to take risks or seek recognition. There is evidence that both conscientiousness and narcissism coexist with the traits of entrepreneurs. Based on

Hypothesis Two (2) The research findings show that, Conscientiousness ($\beta = 0.196, t = 1.019, p = 0.309 > 0.05$) is a positive determinant of Narcissism amongst UK entrepreneurs. There is an insignificant relationship between conscientiousness and narcissism. There is mixed outcome, and the combination of both narcissism and consciousness, the interaction can produce both positive and challenging outcomes. A narcissistic entrepreneur high in conscientiousness may channel their need for achievement into diligent work habits and strategic goal pursuit, and contribute to potentially enhancing business performance. On the other hand, when narcissism is paired with lower conscientiousness, it may lead to impulsive decisions, poor follow-through, and heightened vulnerability to failure. Narcissistic entrepreneurs may also understand how conscientiousness moderates or amplifies narcissistic tendencies, providing valuable insight into entrepreneurial effectiveness, leadership style, and long-term venture sustainability. Overall, there are similarities and differences between conscientiousness and narcissism; the research found no significant relationship and may point to further research.

Extraversion and narcissism are two key personality traits that contribute positively to the entrepreneur's personality and can be useful vehicles in driving success in the development of business and growth. Extraversion and narcissism are two personality characteristics that play a significant role in shaping entrepreneurial behaviour, particularly in how individuals interact, lead, and pursue new opportunities. Extraversion, defined by sociability, assertiveness, enthusiasm, and a tendency to seek stimulation, is often associated with strong networking skills and confidence in navigating uncertain business environments. Narcissism, meanwhile, involves a heightened sense of self-importance, a desire for admiration, and a strong motivation to influence others. Based on **Hypothesis Three (3)**, the research findings show that **extraversion ($\beta = 0.895, t = 5.207, p = <0.001 < 0.05$)** is a positive determinant of Narcissism amongst UK entrepreneurs. Among entrepreneurs, the combination of extraversion and narcissism can amplify behaviours that facilitate business creation and growth, such as persuasive communication, charismatic leadership, and bold risk-taking. Understanding how extraversion intersects with narcissistic tendencies offers valuable insight into entrepreneurial decision-making, leadership dynamics, and the potential strengths that share the outcome of early stage entrepreneurial process.

Agreeableness and narcissism, from the literature, refer to contrasting personality dimensions and that can meaningfully influence the entrepreneurial behaviour. Agreeableness and narcissism represent contrasting personality dimensions that can meaningfully influence entrepreneurial behaviour and interpersonal dynamics. Agreeableness is a personality trait that

supports the need to remain empathetic, characterised by warmth, empathy, cooperation, and a tendency to prioritise harmony within relationships, traits that can support effective teamwork, ethical decision-making, and collaborative business development. Narcissism is the opposite of agreeableness and is marked by self-centredness, a desire for admiration, and a willingness to place personal goals above the needs of others. Based on **Hypothesis Four (4)** on the statistical outcome agreeableness ($\beta = 0.389$, $t = 2.502$, $p = 0.013 < 0.05$) is a positive determinant of Narcissism amongst UK entrepreneurs. There is a statistically significant relationship between narcissism and agreeableness. This is contradictory to the theory in the literature as narcissist tends to be unagreeable. Narcissism is the opposite of agreeableness and is marked by self-centredness, a desire for admiration, and a willingness to place personal goals above the needs of others. Among entrepreneurs, low agreeableness often aligns more closely with narcissistic tendencies, potentially resulting in competitive, assertive, or even exploitative approaches to leadership and negotiation. However, when an entrepreneur exhibits both narcissistic traits and moderate to high agreeableness, the interpersonal impact of narcissism may be softened, enabling them to balance ambition with cooperation and relational sensitivity.

Neuroticism and narcissism have common traits that support the entrepreneurial process, and shows up within the entrepreneurial behaviour, particularly in how individuals respond to stress, uncertainty, and feedback. Neuroticism is characterised by emotional instability, anxiety, mood fluctuations, and a heightened sensitivity to perceived threats or criticism. Narcissism, on the other hand, involves grandiosity, a strong need for admiration, and defensive reactions to ego threats. Among entrepreneurs, the interaction between these traits can create a complex psychological profile. Narcissistic entrepreneurs with high levels of neuroticism may be especially reactive to setbacks, experiencing intense frustration or defensiveness when their self-image is challenged. Based on the statistical results, **Hypothesis Five (5)**, neuroticism ($\beta = -0.174$, $t = -1.189$, $p = 0.236 > 0.05$) is a negative determinant of narcissism amongst UK entrepreneurs. The literature supports the finding that there are narcissistic entrepreneurs are less neurotic. Entrepreneurs experience high stress and face significant risk daily and are less neurotic. Narcissists are also very self-centred and present their abilities to be overconfident, and do not show feelings of fear and anxiety. Overall, narcissistic entrepreneurs are resilient, and they are less likely to be neurotic; entrepreneurship requires emotional regulation, risk management, and the stability of leadership.

Overall Big Five Theory is a foundation theory of internal behaviour and Theuer. In summary, there is a significant relationship between Big Five Theory and Narcissism. The statistical **Hypothesis Five (5), big five theory** results $p = <0.001$ ($p < 0.05$). This contributes to

the literature that amongst 250 entrepreneurs, Big Five Theory has commonalities with narcissism. The research then contributes further after setting the foundation that narcissism has common traits with the personalities that contribute to the entrepreneurial process. Therefore, the research will look at narcissism preference for internal and external funding, and whether narcissistic entrepreneurs are likely to be successful in acquiring external funding at their first attempt.

Second, the research then builds on the foundation of theory to contribute to the literature of entrepreneurial finance by examining the relationship between narcissism and preference for external funding. The research looks at examining the following **Research Question Two (2) (RQ₂):** *What is the association between Personality (narcissism, openness to experience and extraversion) and preference for internal or external funding amongst UK entrepreneurs?* The research questions look at the role personality traits play in shaping the UK entrepreneur's preference for internal versus external funding sources. The findings relating to RQ2 indicate that personality traits play a meaningful role in shaping UK entrepreneurs' preferences for internal versus external funding sources. Narcissism is hypothesised to be positively associated with the preference for external funding based on the literature, which aligns with literature suggesting that narcissistic entrepreneurs seek visibility, external validation, and rapid growth opportunities that are more readily supported by venture capital or angel investment. Based on the research, statistical results **Hypothesis Seven (7), p=0.046<0.05**, and the expected probability outcome of **Exp (B)= 1.043**, which is above one and closer to the option of preferring external funding. Therefore, the statistical results support the theory that narcissistic entrepreneurs. There is an understanding that entrepreneurs who are open to experience are those who demonstrate a greater inclination towards external funding, and this is aligned with their inclination to pursue novel, intriguing and great opportunities and embrace uncertainty. The research looks at whether openness to experience also intensifies the relationship between narcissism and preferences for external funding. The statistical results of **Hypothesis 8a (H8a), p=0.628> 0.05**. The research found a statistically insignificant relationship between openness to experience and preference for funding, with an expected **Exp(B) of 0.980**. It was also interesting to note that narcissism remains significant and increases with the influences of the relationship with openness to experience. In contrast, extraversion shows a more nuanced association. Overall, narcissism remains significant with **p=0.041 <0.05**. Moreover, likely to prefer external funding **Exp(B) 1.047**. Therefore, to conclude, narcissism was statistically significant with preferences for external funding, and openness was statistically insignificant.

Extrovert entrepreneurs are typically confident and socially oriented, with traits that facilitate networking with investors. The research is examining the patterns that suggest that personality traits help to explain why some entrepreneurs actively seek investor involvement while others rely on internal capital or self-funding. The research seeks to examine the association between narcissism and extraversion with preferences for external funding. The statistical outcome for **Hypothesis 8b (H8b)**, extraversion, with a **p=0.246> 0.05** means the relationship between extraversion and the dependent variable is insignificant as the p-value is greater than 0.05, and the odds ratio is 0.924. Therefore, the research found that extraversion was statistically insignificant and was more likely in the odds of preference for internal funding. The odds ratios for narcissism and extraversion to experience are **Exp(B) 1.052 and 0.924**, respectively. Narcissism statistically significantly increased with the inclusion of extraversion, **p=0.024 <0.05**, which is more significant than narcissism, **Hypothesis Seven (7), p=0.046< 0.05**, with openness to experience; **Hypothesis 8a (H8a), p=0.041 <0.05**. Based on the findings, openness to experience and extraversion are statistically insignificant with preference for more internal funding, while narcissism is statistically significant with preference for external funding. This contributes to the literature by bringing awareness to the likelihood of narcissistic entrepreneurs having a preference to pursue external funding, and narcissism is a vehicle to take entrepreneurs through the financial resource acquisition process.

Thirdly, based on these findings, it was important to understand the impact of whether entrepreneurs who are narcissistic are likely to be successful in external funding at their first attempt in the financial resources acquisition process, and to analyse the impact of socio-economic factors and success in external funding. The research examines **Research Question Three (3) (RQ3): Do personality traits (Narcissism, Openness to Experience and Extraversion), including socio-economic factors, influence the success of obtaining external funding at first attempt?** The relationship between personality (narcissism, openness to experience, and extraversion) does not influence the successful obtaining of external funding. Based on **Hypothesis Nine (9)**, narcissism is statistically insignificant with a **p-value = 0.277>0.05** and is statistically insignificant in successfully obtaining external funding, which was in the odds of **Exp(B) 0.976**, which is more aligned with being successful in external funding. Openness to experience is statistically insignificant to the dependent variable, **p-value = 0.528 > 0.05**, and odds ratio of **Exp(B) 0.975**, with more aligned with being successful with external funding. Extraversion is statistically insignificant to the dependent variable, **p-value = 0.514 > 0.05**. The odds ratio for extraversion is **Exp(B) 0.960** and shows more alignment with being successful at external funding. Overall personality, such as narcissism, openness to

experience, does not significantly influence the successful obtaining of external funding. This contributes to knowledge and literature in entrepreneurial finance.

The research further examines the socio-economic factors such as age, gender, education, ethnicity, business experience, business size and industry. These are factors that is important to contribute to the knowledge in the literature. The research statistical results **Hypothesis Ten (10)**, age was statistically insignificant to successfully obtain external finding **p-value = 0.138>0.05**. **Gender** is statistically insignificant, **p-value = 0.330 > 0.05**. **Education** is statistically insignificant with a **p-value=0.895 >0.05**. **Ethnicity**, statistically significant with a **p-value =0.016<0.05**, and influences the outcome of successfully obtaining external funding, an odds ratio in favour of not successfully obtaining external funding **Exp(B) 1.121**. **Experience** is statistically insignificant with a **p-value =0.191>0.05**. Business size (no of employees), statistically significant with a **p-value =0.018<0.05**, there is a significant relationship between business size (no. of employees) and successfully obtaining external funding with an odds ratio **Exp (B) 0.518** in favour of successfully obtaining external funding. Industry was also statistically significant, **p-value =0.019<0.05**, with an odds ratio of **Exp (B) 1.094**.

The research found a significant relationship between narcissism and openness to experience, extraversion and agreeableness. The research also found a statistically significant relationship between narcissism and preferences for external funding; however, narcissism was not actually successful in external funding. In the examination of socio-economic factors, ethnicity, Business and Industry. The research has contributed to knowledge in the field of entrepreneurial finance and provides areas of future research within the presence of the field of entrepreneurship.

7.7 Conclusion

This study aimed to provide more direction for research developing around narcissism and entrepreneurship. There is limited research within the field of personality and entrepreneurial finance. Based on the various theories that have been examined in this study, it was noted that narcissists have been linked to resource acquisition, and the study draws upon the existing theoretical framework. Various studies have been published to contribute to the theory of entrepreneurs and the literature. One such study that has been published is one that examined the relationship between crowdfunding and narcissism, which was discussed in the literature review. Additionally, several theories look at the success of narcissists in rising to the

top of organisations, and numerous studies have been conducted on the rise, with the examination of SMEs and entrepreneurs in the field of entrepreneurship. Over the last decade, work has been done on narcissism within the workplace and the corporate atmosphere and within the academic space with students and corporate executives; however, little work has been done within entrepreneurship. This study establishes findings and research gaps for narcissism, personality and resource acquisition processes within entrepreneurial finance.

By examining narcissism and the Big Five personalities, the research establishes a connection between traits of narcissism among UK entrepreneurs. Openness to experience, extraversion and agreeableness were found to be significantly associated with narcissistic entrepreneurs within the UK, while conscientiousness and neuroticism were found to be insignificant. The research then further explores the acquisition of financial resources amongst narcissistic entrepreneurs across the UK and whether the financial decision preference is aligned with internal and external funding. The study revealed that narcissistic entrepreneurs prefer external funding, which is aligned with their preference for taking risks, and external funding is considered to have a higher propensity for risk than internal funding. The results indicated that narcissists prefer external funding, which is contrary to the literature, which discusses the preference for internal funding to avoid the fragile ego of failing at external funding; interestingly, the research revealed that they prefer external funding.

The study then examines how openness to experience and extraversion influence this preference for external funding. The results suggested that openness to experience, including creativity and extraversion–social dominance, influences the significant association between narcissism and the odds of preferring external funding. Therefore, to add to the literature, openness to experience and extraversion significantly increase the relationship between narcissism and preference for funding. This was in alignment with the theory on the narcissist risk attitude and over-emphasis on their capabilities. Though the relationship between openness to experience and extraversion influences and magnifies the positive relationship between narcissism and preference for external funding, it was noted that there is no significant relationship between openness to experience and extraversion.

Therefore, it was important to eliminate their preferences and focus on the actual results of the business in receiving funding. The research then looked at the actual outcomes of successfully obtaining external funding throughout the first attempt by the entrepreneur; there was no significant relationship; however, the results were higher in the odds of receiving external funding at the first attempt. There is no significant relationship between narcissism and being successful at external funding; again, when the narcissistic entrepreneur was

examined against preference, there was a significant relationship; when actual success was discussed, this showed no significant relationship. In both cases, they were more likely to prefer external funding. However, it is essential to note that the narcissistic entrepreneur's preference for external financing could be a factor in their ego. The findings have advanced the limited research on personality and entrepreneurial finance, focusing on narcissism and the Big Five personality traits and their influence on the research acquisition process. This is to create contributions to investors and entrepreneurial educators. The research also examines socio-economic factors such as age, gender, education, ethnicity, business experience, business size and industry. The research reveals that socioeconomic factors such as ethnicity, business size and industry were statistically significant with being successful at the first attempt of securing external funding.

7.8 Areas for Future Research

This research suggests further examination of other moderating factors, such as industry, gender, and marital status, which also play an essential part in personality, financial decisions, preferences, and success with funding in a particular sector. The literature has shown that males are more narcissistic than females' gender, and there is more influence on what industry narcissistic personalities may be attracted to, such as the fashion and entertainment industry. Secondly, family unions must be examined, which may also be essential in financial decisions and decision-making when investing in small and medium-sized enterprises. Secondly, it is important to note that regional locations such as the USA, Asia, Africa, and the Caribbean may require further exploration. Further examination regarding ethnicity, as the access and financial choices and references, when funding a business, may be impacted by cultural diversity, may be necessary for further research.

Narcissism has several influencing factors for entrepreneurial choice, activities, and output. There is a need for further research that looks at resilience, narcissism, and entrepreneurial finance. Research has found that psychological resilience also weakens the positive correlation between narcissism, entrepreneurial intention, and entrepreneurial finance (Wu et al., 2019). Further research on the financing choices of narcissistic entrepreneurs can be of great value to the field of study by supporting academics, entrepreneurs, steam houses, and incubators to help entrepreneurs with the psychological dimension of starting a venture. Centring research on entrepreneurs, entrepreneurial ventures, and the entrepreneurial environment may lead researchers to understand entrepreneurship better; there is a further need to examine the entrepreneur as the focal point of entrepreneurship (Lévesque & Stephan, 2020).

For this reason, scholars need to examine further the need for research on the significant role of the entrepreneur psyche in the various entrepreneurial activities and phenomena (Lévesque & Stephan, 2020).

There is a need for further research to examine what external factors are influenced by personality and narcissism (Zajenkowski & Szymaniak, 2021). Further research on narcissism and entrepreneurship can examine productivity and unproductiveness over time to better understand how this impacts entrepreneurial activities over the short- and long term. There is also a need for further hypothesis testing on the time scale of narcissism, to include more empirical and quantitative research on narcissism and entrepreneurship. Further research examines moderators and mediations relating to relationships such as age, educational background, ethnicity, industry, and sector and how this influences the relationship between narcissism and entrepreneurship. Further research could also focus on larger samples above 250; however, entrepreneurs are highly business individuals, and there is a detail of attention needed to complete surveys and interviews. Further research can be focused on other areas, such as the USA, China, and Africa, which may have different institutional characteristics. It could also examine the dynamics within various personalities in moderating narcissism and possible further combinations of personalities.(Brahmana & Kontesa, 2023). There is a need to examine further moderating factors such as culture, humour, leadership style, and demographics such as education, ethnicity, gender, and experience. Other moderating factors that can be considered are the networking and power of the founding entrepreneur, which may strengthen or weaken narcissism and financial decisions. With the increased AI and technology encompassing the financial services industry, digital payment, remittances, cryptocurrency, and P2P lending may provide unique findings when studied within the context of personality and narcissism. There is a need for further work to examine narcissism and funding within the various industries of entrepreneurship. There is a research gap in entrepreneurial finance that encourages scholars to research and publish further discussion and knowledge on the role of personality traits. The literature review pointed to additional work to be done by looking at equity investors' characteristics that determine their entrepreneurial finance investment allocations. There is a further call for research on how the individual characteristics of entrepreneurs influence their external financing decisions, which source of capital they consider, and how successful they are in fundraising. Scholars are also calling for further research on the personal characteristics of both the investor and the entrepreneur to determine the best fit.

7.9 Reflection of Research Study

Reflecting on the research's outcome, it was interesting to note that some hypotheses were justified and accepted based on the empirical results. Further potential of the research could be to examine race and narcissism within the context of entrepreneurship. There is also the potential to examine marital status and financial decisions. Further exploration of socio-economic factors such as ethnicity, business size and industry. Overall, the study has contributed to the knowledge of theoretical and practical implications and has outlined the future areas of contribution and research for other scholars within the research field.

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APPENDICES

Appendix A- Ethics Letter of Approval



Faculty of Business, Law & Social Sciences Research Office
Curzon Building, 4 Cardigan Street
Birmingham
B4 7BD

BLSSethics@bcu.ac.uk;

29/Mar/2023

Ms Careen Bailey
Careen.Bailey@mail.bcu.ac.uk

Dear Careen ,

Re: Bailey #/11269 /sub2 /R(A) /2023 /Mar /BLSS FAEC - ENTREPRENEURIAL FINANCE: UK SMEs Entrepreneurs' Personality Traits and Narcissism are Determinant Factors in External Financing Decisions.

Thank you for your application and documentation regarding the above activity. I am pleased to take Chair's Action and approve this activity.

Provided that you are granted Permission of Access by relevant parties (meeting requirements as laid out by them), you may begin your activity.

I can also confirm that any person participating in the project is covered under the University's insurance arrangements.

Please note that ethics approval only covers your activity as it has been detailed in your ethics application. If you wish to make any changes to the activity, then you must submit an Amendment application for approval of the proposed changes.

Examples of changes include (but are not limited to) adding a new study site, a new method of participant recruitment, adding a new method of data collection and/or change of Project Lead.

Please also note that the Business, Law and Social Sciences Faculty Academic Ethics Committee should be notified of any serious adverse effects arising as a result of this activity.

If for any reason the Committee feels that the activity is no longer ethically sound, it reserves the right to withdraw its approval. In the unlikely event of issues arising which would lead to this, you will be consulted.

Keep a copy of this letter along with the corresponding application for your records as evidence of approval.

If you have any queries, please contact BLSSethics@bcu.ac.uk;

If you would like to provide feedback on the ethics process, please complete the feedback form using [this link](#).

I wish you every success with your activity.

Yours Sincerely,

Dr Stefania Paladini

On behalf of the Business, Law and Social Sciences Faculty Academic Ethics Committee

Appendix B- Big Five Inventory (BFI) Questionnaire

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

1. Disagree strongly
2. Disagree a little
3. Neither agree nor disagree
4. Agree a little
5. Agree strongly

I See Myself as Someone Who . . .

1. Is talkative
2. Tends to find fault with others
3. Does a thorough job
4. Is depressed, blue
5. Is original, comes up with new ideas
6. Is reserved
7. Is helpful and unselfish with others
8. Can be somewhat careless
9. Is relaxed, handles stress well
10. Is curious about many different things
11. Is full of energy
12. Starts quarrels with others
13. Is a reliable worker
14. Can be tense
15. Is ingenious, a deep thinker
16. Generates a lot of enthusiasm
17. Has a forgiving nature
18. Tends to be disorganized
19. Worries a lot
20. Has an active imagination
21. Tends to be quiet
22. Is generally trusting
23. Tends to be lazy
24. Is emotionally stable, not easily upset
25. Is inventive
26. Has an assertive personality
27. Can be cold and aloof
28. Perseveres until the task is finished
29. Can be moody
30. Values artistic, aesthetic experiences
31. Is sometimes shy, inhibited
32. Is considerate and kind to almost everyone
33. Does things efficiently
34. Remains calm in tense situations
35. Prefers work that is routine
36. Is outgoing, sociable
37. Is sometimes rude to others
38. Makes plans and follows through with them
39. Gets nervous easily
40. Likes to reflect, play with ideas
41. Has few artistic interests
42. Likes to cooperate with others
43. Is easily distracted
44. Is sophisticated in art, music, or literature

Please check: Did you write a number in front of each statement?

BFI scale scoring ("R" denotes reverse-scored items):

Extraversion: 1, 6R, 11, 16, 21R, 26, 31R, 36; Agreeableness: 2R, 7, 12R, 17, 22, 27R, 32, 37R, 42; Conscientiousness: 3, 8R, 13, 18R, 23R, 28, 33, 38, 43R; Neuroticism: 4, 9R, 14, 19, 24R, 29, 34R, 39; Openness: 5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44

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Appendix C- Narcissism Personality Inventory (NPI40) Questionnaire

Exploitativeness Subscale

- 6 **A. I can usually talk my way out of anything.**
B. I try to accept the consequences of my behavior.
- 13 **A. I find it easy to manipulate people.**
B. I don't like it when I find myself manipulating people.
- 16 **A. I can read people like a book.**
B. People are sometimes hard to understand.
- 23 A. Sometimes I tell good stories.
B. Everybody likes to hear my stories.
- 35 A. People sometimes believe what I tell them.
B. I can make anybody believe anything I want them to.

Authoritativeness Subscale

- 1 **A. I have a natural talent for influencing people.**
B. I am not good at influencing people.
- 8 **A. I will be a success.**
B. I am not too concerned about success.
- 10 A. I am not sure if I would make a good leader.
B. I see myself as a good leader.
- 11 **A. I am assertive.**
B. I wish I were more assertive.
- 12 **A. I like to have authority over other people.**
B. I don't mind following orders.
- 32 A. Being an authority doesn't mean that much to me.
B. People always seem to recognize my authority.
- 33 **A. I would prefer to be a leader.**
B. It makes little difference to me whether I am a leader or not.
- 36 **A. I am a born leader.**
B. Leadership is a quality that takes a long time to develop.

Superiority Subscale

4 A. When people compliment me I sometimes get embarrassed.
B. I know that I am good because everybody keeps telling me so.

9 A. I am no better or worse than most people.
B. I think I am a special person.

26 A. Compliments embarrass me.
B. I like to be complimented.

37 A. **I wish somebody would someday write my biography.**
 B. I don't like people to pry into my life for any reason.

40 A. I am much like everybody else.
B. I am an extraordinary person.

Self-Sufficiency Subscale

17 A. If I feel competent I am willing to take responsibility for making decisions.
B. I like to take responsibility for making decisions.

21 A. **I always know what I am doing.**
 B. Sometimes I am not sure of what I am doing.

22 A. I sometimes depend on people to get things done.
B. I rarely depend on anyone else to get things done.

31 A. **I can live my life in any way I want to.**
 B. People can't always live their lives in terms of what they want.

34 A. **I am going to be a great person.**
 B. I hope I am going to be successful.

39 A. **I am more capable than other people.**
 B. There is a lot that I can learn from other people.

Entitlement Subscale

5 A. The thought of ruling the world frightens the hell out of me.
B. If I ruled the world it would be a better place.

14 A. **I insist upon getting the respect that is due me.**
 B. I usually get the respect that I deserve.

18 A. I just want to be reasonably happy.
B. I want to amount to something in the eyes of the world.

24 A. **I expect a great deal from other people.**
 B. I like to do things for other people.

25 A. **I will never be satisfied until I get all that I deserve.**
 B. I take my satisfactions as they come.

27 A. **I have a strong will to power.**
 B. Power for its own sake doesn't interest me.

Vanity Subscale

- 15 A. I don't particularly like to show off my body.
B. I like to show off my body.
- 19 A. My body is nothing special.
B. I like to look at my body.
- 29 **A. I like to look at myself in the mirror.**
B. I am not particularly interested in looking at myself in the mirror.

Exhibitionism Subscale

- 2 **A. Modesty doesn't become me.**
B. I am essentially a modest person.
- 3 **A. I would do almost anything on a dare.**
B. I tend to be a fairly cautious person.
- 7 A. I prefer to blend in with the crowd.
B. I like to be the center of attention.
- 20 A. I try not to be a show off.
B. I will usually show off if I get the chance.
- 28 A. I don't care about new fads and fashions.
B. I like to start new fads and fashions.
- 30 **A. I really like to be the center of attention.**
B. It makes me uncomfortable to be the center of attention.
- 38 **A. I get upset when people don't notice how I look when I go out in public.**
B. I don't mind blending into the crowd when I go out in public.

Appendix D- PhD Survey Instrument

Survey

Entrepreneur's Personality and Financing Decision Choices – “Financial Resource Acquisition”

Start of Block: Introduction & Consent Form

Purpose of the Study. In this study, we would like to gather information about the relationship between personality and external funding, as well as questions about yourself and your business. In particular, this research aims to examine how entrepreneurs' personalities shape their external financing decisions, in terms of whether they failed or succeeded in external funding, and which sources of capital they consider.

What will the study involve? We will ask you a series of questions regarding your personality and the outcome of external funding received for your business/enterprise. The survey will not take more than 10 mins.

Will your participation in the study be kept confidential? Yes, all information that is collected about you during the course of the research will be kept confidential. No names will be identified at any time. All hard copy information will be held in a locked cabinet at the researchers' place of work, electronic information will be encrypted and held securely on university servers and will be accessed only by the main researcher. No information will be distributed to any other unauthorized individual or third party.

What if there is a problem? If you experience any distress following the questionnaire, you may contact the director of studies directly at javed.hussain@bcu.ac.uk. If you agree to participate in the survey, please complete and indicate your consent below.

Thank you for taking the time to read this.

I have read and understood the above consent form and desire of my own free will to participate in this study.

Yes

No

Skip To: End of Survey If I have read and understood the above consent form and desire of my own free will to participate i... = No

End of Block: Introduction & Consent Form

Start of Block: Personality

For the first section of this survey, we will ask you to answer a few questions about your personality and characteristics.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I see myself as someone who tends to find fault with others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see myself as someone who does a thorough job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see myself as someone who is depressed, blue.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see myself as someone who is original, comes up with new ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see myself as someone who is reserved.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see myself as someone who is helpful and unselfish with others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see myself as someone who can be somewhat careless.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I see myself as someone who is relaxed, handles stress well.	<input type="radio"/>				
I see myself as someone who is curious about many different things.	<input type="radio"/>				
I see myself as someone who is full of energy.	<input type="radio"/>				
I see myself as someone who starts quarrels with others.	<input type="radio"/>				
I see myself as someone who is reliable worker.	<input type="radio"/>				
I see myself as someone who can be tense.	<input type="radio"/>				
I see myself as someone who is ingenious, a deep thinker.	<input type="radio"/>				
I see myself as someone who generates a lot of enthusiasm.	<input type="radio"/>				
I see myself as someone who has forgiving nature.	<input type="radio"/>				
I see myself as someone who tends to be disorganized.	<input type="radio"/>				
I see myself as someone who worries a lot.	<input type="radio"/>				
I see myself as someone who has an active imagination.	<input type="radio"/>				

I see myself as someone who tends to be quiet.	<input type="radio"/>				
I see myself as someone who is generally trusting.	<input type="radio"/>				
I see myself as someone who tends to be lazy.	<input type="radio"/>				
I see myself as someone who is emotionally stable, not easily upset.	<input type="radio"/>				
I see myself as someone who is inventive.	<input type="radio"/>				
I see myself as someone who has an assertive personality.	<input type="radio"/>				
I see myself as someone who can be cold and aloof.	<input type="radio"/>				
I see myself as someone who perseveres until the tasks is finished.	<input type="radio"/>				
I see myself as someone who can be moody.	<input type="radio"/>				
I see myself as someone who values artistic, aesthetic experiences.	<input type="radio"/>				
I see myself as someone who is sometimes shy, inhibited.	<input type="radio"/>				
I see myself as someone who is considerate and kind to almost everyone.	<input type="radio"/>				

I see myself as someone who does things efficiently.	<input type="radio"/>				
I see myself as someone who remains calm in tense situations.	<input type="radio"/>				
I see myself prefer work that is routine.	<input type="radio"/>				
I see myself as someone outgoing and sociable.	<input type="radio"/>				
I see myself as sometimes rude to others.	<input type="radio"/>				
I see myself as someone who makes plans and follows through with them.	<input type="radio"/>				
I see myself as someone who gets nervous easily.	<input type="radio"/>				
I see myself as someone who gets nervous easily.	<input type="radio"/>				
I see myself as someone who likes to reflect, play with ideas.	<input type="radio"/>				
I see myself as someone who has few artistic interests.	<input type="radio"/>				
I see myself as someone who likes to cooperate with others.	<input type="radio"/>				
I see myself as sometimes who is easily distracted.	<input type="radio"/>				

I see myself as someone who is sophisticated in art, music, or literature.

Source: John, O., & Srivastava, S. (1991). Chapter 4. The Big Five Trait Taxonomy: History, Measurement, and Theoretical Perspectives (Second Edition). The Big Five Inventory

End of Block: Big Five Personality

Start of Block: Narcissistic Personality



This section consists of a number of pairs of statements with which you may or may not identify. Please **read each pair of statements and then choose the one that is closer to your own feelings about yourself. You may identify with both A and B.** In this case you should choose the statement which seems closer to yourself. Or, if you do not identify with either statement, select the one which is least objectionable or remote.

		A or B
A	I have a natural talent for influencing people.	<input type="radio"/>
B	I am not good at influencing people.	<input type="radio"/>
<hr/>		
A	Modesty doesn't become me.	<input type="radio"/>
B	I am essentially a modest person.	<input type="radio"/>
<hr/>		
A	I would do almost anything on a dare.	<input type="radio"/>

B	I prefer to blend in with the crowd.	<input type="radio"/>
A	When people compliment me, I sometimes get embarrassed.	<input type="radio"/>
B	I know that I am good because everybody keeps telling me so.	<input type="radio"/>
A	The thought of ruling the world frightens the hell out of me.	<input type="radio"/>
B	If I ruled the world, it would be a better place.	<input type="radio"/>
A	I can usually talk my way out of anything.	<input type="radio"/>
B	I try to accept the consequences of my behaviour.	<input type="radio"/>
A	I prefer to blend in with the crowd.	<input type="radio"/>
B	I like to be the centre of attention.	<input type="radio"/>
A	I will be a success.	<input type="radio"/>
B	I am not too concerned about success.	<input type="radio"/>
A	I am no better or worse than most people.	<input type="radio"/>
B	I think I am a special person.	<input type="radio"/>

A	I am not sure if I would make a good leader.	<input type="radio"/>
B	I see myself as a good leader.	<input type="radio"/>
A	I am assertive.	<input type="radio"/>
B	I wish I were more assertive.	<input type="radio"/>
A	I like to have authority over other people.	<input type="radio"/>
B	I don't mind following orders.	<input type="radio"/>
A	I find it easy to manipulate people.	<input type="radio"/>
B	I don't like it when I find myself manipulating people	<input type="radio"/>
A	I insist upon getting the respect that is due to me.	<input type="radio"/>
B	I usually get the respect that I deserve.	<input type="radio"/>
A	I don't particularly like to show off my body.	<input type="radio"/>
B	I like to show off my body.	<input type="radio"/>
A	I can read people like a book.	<input type="radio"/>

B	People are sometimes hard to understand	<input type="radio"/>
A	If I feel competent I am willing to take responsibility for making decisions.	<input type="radio"/>
B	I like to take responsibility for making decisions.	<input type="radio"/>
A	I just want to be reasonably happy.	<input type="radio"/>
B	I want to amount to something in the eyes of the world.	<input type="radio"/>
A	My body is nothing special.	<input type="radio"/>
B	I like to look at my body.	<input type="radio"/>
A	I try not to be a show off.	<input type="radio"/>
B	I will usually show off if I get the chance.	<input type="radio"/>
A	I always know what I am doing.	<input type="radio"/>
B	Sometimes I am not sure of what I am doing.	<input type="radio"/>
A	I sometimes depend on people to get things done.	<input type="radio"/>
B	I rarely depend on anyone else to get things done.	<input type="radio"/>

A	Sometimes I tell good stories.	<input type="radio"/>
B	Everybody likes to hear my stories.	<input type="radio"/>
A	I expect a great deal from other people.	<input type="radio"/>
B	I like to do things for other people.	<input type="radio"/>
A	I will never be satisfied until I get all that I deserve.	<input type="radio"/>
B	I take my satisfaction as they come.	<input type="radio"/>
A	Compliments embarrass me.	<input type="radio"/>
B	I like to be complimented.	<input type="radio"/>
A	I have a strong will to power.	<input type="radio"/>
B	Power for its own sake does not interest me.	<input type="radio"/>
A	I don't care about new fads and fashions.	<input type="radio"/>
B	I like to start new fads and fashion.	<input type="radio"/>

A	I like to look at myself in the mirror.	<input type="radio"/>
B	I am not particularly interested in looking at myself in the mirror.	<input type="radio"/>
A	I really like to be the centre of attention.	<input type="radio"/>
B	It makes me uncomfortable to be the center of attention.	<input type="radio"/>
A	I can live my life in any way I want to.	<input type="radio"/>
B	People can't always live their lives in terms of what they want.	<input type="radio"/>
A	Being an authority doesn't mean that much to me.	<input type="radio"/>
B	People always seem to recognize my authority.	<input type="radio"/>
A	I would prefer to be a leader.	<input type="radio"/>
B	It makes little difference to me whether I am a leader or not.	<input type="radio"/>
A	I am going to be a great person.	<input type="radio"/>
B	I hope I am going to be successful.	<input type="radio"/>

A	People sometimes believe what I tell them.	<input type="radio"/>
B	I can make anybody believe anything I want them to.	<input type="radio"/>
A	I am a born leader.	<input type="radio"/>
B	Leadership is a quality that takes a long time to develop.	<input type="radio"/>
A	I wish somebody would someday write my biography.	<input type="radio"/>
B	I don't like people to pry into my life for any reason.	<input type="radio"/>
A	I get upset when people don't notice how I look when I go out in public.	<input type="radio"/>
B	I don't mind blending into the crowd when I get out in public.	<input type="radio"/>
A	I am more capable than other people.	<input type="radio"/>
B	There is a lot that I can learn from other people.	<input type="radio"/>
A	I am much like everybody else.	<input type="radio"/>
B	I am an extraordinary person.	<input type="radio"/>

SOURCE: Raskin, R., & Terry, H. (1988). A Principal-Components Analysis of the Narcissistic Personality Inventory and Further Evidence of Its Construct Validity. In *Journal of Personality and Social Psychology* (Vol. 54, Issue 5).

End of Block: Narcissistic Personality

Start of Block: Personal Characteristics on Founder- Owner



Are you the owner/founder of the business?

- Yes
- No

What is your age?

- 22 -33
- 34-45
- 46-65
- 66-75
- 76+

What is your biological gender?

- Male
- Female
- Other
- Rather not to say

What is your Ethnicity?

- White – British
- White- Irish
- Any other white background
- Mixed – White and Black Caribbean
- Mixed – White and Black African
- Mixed- White and Asian

- Any other mixed background
- Asian or Asian British – Indian
- Asian or Asian British – Pakistani
- Asian or Asian British – Bangladeshi
- Any other Asian background
- Black or Black British – Caribbean
- Black or Black British – African
- Any other Black background
- Other Black background
- Chinese
- Gypsy or Traveller
- Arab
- Other Ethnic background (Specify)_____

What is the highest level of academic qualification?

- No academic qualifications
- O- levels/ GCSE/Scottish O- grades
- A- levels/ Scottish highers
- HND/HNC
- City and Guilds/ NVQ
- Professions qualifications (e.g., CA, CIMA , ACCA, C.Eng, MIPD)
- Undergraduate degree
- Postgraduate degree - Masters
- Postgraduate degree - Doctoral
- Other (Specify)_____

How many years' experience do you have managing and owning a business ?

- Less than 1 year ago

- 1-3 years ago
- 4-6 years ago
- 7-9 years ago
- 10-15 years ago
- More than 15 years ago
- unknown
- Rather not to say

What was the principal reason why you/owner started this business?

- To make money
- Had a good business idea
- To be my own boss/ desire for independence
- To fulfil a life's ambition/ personal goals
- Entrepreneurship runs in the family/parent(s) are /were entrepreneurs
- Lack of other jobs/opportunities
- Inherited/took over business
- Frustrated with 9-5 job
- Other reasons (specify) _____

Source: Stuart, W., & Fraser, A. (2004). *UK Survey of SME Finances, A Survey Instrument, Centre for Small and Medium Sized Enterprises, Warwick Business School*.

End of Block: Personal Characteristics on Founder- Owner

Start of Block: Firm Demographics



How many years has the business been in operation?

- 0-1 year
- 2-3 years

- 4-5 years
- Above 5 years

Is the business run for?

- Profit
- As a social enterprise
- Not for profit (Charities)
- Other (Specify) _____

What is the ownership structure of the business?

- Owned personally
- Jointly owned

Is the business registered?

- Yes
- No

What is the ownership structure of the business?

- Sole proprietorship (single-owner)
- Partnership
- Limited liability partnership
- Limited Liability Company (private limited company, public limited company, private unlimited company)

How many years of experience have you/has the owner had managing or owning a business, including this business?

- Less than 1 year ago
- 1-3 Years ago
- 4-6 years ago
- 7-9 years ago
- 10-15 years ago

- More than 15 years ago
- Other (Specify) _____

Did you establish the business or was the business established by one or more of the current

- Established
- Purchased
- Inherited
- Acquired as a gift

How many people, including you, work in this business?

- 1
- 2-10
- 11-49
- 50-99
- 100-199
- 200-249
- 250+

What industry most related to the enterprise?

- Construction
- Professional, scientific and technical
- Wholesale and retail
- Administrative and support services activities
- Other service activities
- Human health and social work activities
- Transportation and storage
- Information and communication

- Education
- Arts, entertainment and recreation
- Manufacturing
- Accommodation and food services
- Real estate activities
- Financial and Insurance activities
- Agriculture, hunting, forestry and fishing
- Production activities
- Other (Specify) _____

What is the principal activity of this business?

What Region are you located in the United Kingdom?

- London
- South East
- East of England
- South West
- North West
- West Midlands

- Yorkshire and the Humber
- East Midlands
- Scotland
- Wales
- North East
- Northern Ireland

What was your turnover for the last financial year?

- < £25,000
- £25,000-49,999
- £50,000-74,999
- £75,000-99,999
- £100,000- 499,999
- £500,000- 9,999,999
- £1m – 4.9 m
- £5m-9.9m
- £10m- 49.9m
- £50m+
- Don't Know
- Refused
- Other (Specify) _____

Source: Stuart & Fraser, 2004, *UK Survey of SME Finances, A Survey Instrument, Centre for Small and Medium Sized Enterprises, Warwick Business School*

End of Block: Firm Demographics

Start of Block: Financing Decision



Which of the following issues, if any, caused problems for your business at start-up?

- Business planning
- Finding premises
- Cost of premises
- Finding sources of finance
- Cost of finance
- Finding customers
- Availability of skilled workers
- Employee costs/wage bills
- Coping with regulations/red tape
- Competition from other firms
- Lack of advice/support
- No problems/none of these issues

What sources of finance were used to establish the business?

- Personal savings
- Mortgage on home
- Credit card (balance due may be carried forward each month)
- Chargecard (balance due paid off in full each month) $\frac{3}{4}$
- Gift from friends/family
- Loan from a bank/building society/finance company
- Loan from friends/family
- Issuing shares to friends/family
- Issuing shares to one or more business angels
- Issuing shares to a venture capitalist
- Issuing shares to other investor (specify)
- Grant/subsidized loan from a public authority
- NONE
- Don't Know
- Other sources (specify) _____

which of the following forms of finance you have used over the last 3 years for business purposes?

- Current accounts (including personal accounts if used for business purposes)
- Overdraft (even if facility is there but has not been used)
- Deposit accounts (including personal accounts if used for business purposes)
- Grants (A grant is a sum of money given to a business for a specific project or purpose. They are available from a variety of public and private sources including the government, the EU and some charitable organizations.)
- Commercial loans / mortgages from banks and other financial institutions (not including loans from friends, family or business owners)
- Leasing or hire purchase
- Asset based finance (including factoring, invoice discounting and stock finance. This is where a business sells its invoices and receives up to 90% of their value.)
- Credit cards (This includes personal or business credit cards used for business purposes. This means a card where you do NOT have to pay off the balance in full at the end of the month, not a store card. It also excludes debit cards)
- Issuing shares (shares provide the investor with an ownership interest in the firm while providing the firm with cash or some other asset. It does NOT include any funds that the firm obtained from loans, or that must be repaid at some future date.)

Specify whether you have received funding from one of the following external sources?

External financing is any funding received outside of your own personal finances and family.

- Use of Grant Financing
- Commercial loans and Mortgages from financial institutions
- Leasing
- Hire purchase
- Asset based finance (including factoring, invoice discounting and stock finance. This is where a business sells its invoices and receives up to 90% of their value.)
- Issuing shares (shares provide the investor with an ownership interest in the firm while providing the firm with cash or some other asset. It does NOT include any funds that the firm obtained from loans, or that must be repaid at some future date.)

If you have received external funds, were successful at the first attempt in acquiring financing ?

- Yes
- No
- Not Know

How much external funding did acquire?

- Less than £5,000
- £5,000 - £9,999
- £10,000 - £49,999
- £50,000 - £99,999
- £100,000 - £499,999
- £500,000 - £999,999
- £1m+
- Don't Know
- Other Specify _____

Did you consider external funding decision a difficult process?

- Yes
- No
- Don't Know

If you were seeking external financing now, how would you do it again, differently or same approach

What method of external funding would you consider more effective?

What information did you have to provide for external funding / investors?

End of Block: Firm source of funding

Start of Block: Conclusion

Thank you for agreeing to participate in this study.

We were mostly interested in examining to what degree individual differences, such as personality traits can impact success in external funding.

Thank you again.

Please find your survey code below:

SURVERY CODE:

End of Block: Conclusion

Appendix E- Reliability and Validity Statistical Outcome

Appendix E Tables 1: SPSS results of Reliability and Validity of Big Five Inventory (BFI) Scale adopted in the Questionnaire in Piloted Activities

Case Processing Summary			
		N	%
Cases	Valid	40	100
	Excluded ^a	0	0
	Total	40	100

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
0.752	5

Item Statistics			
	Mean	Std. Deviation	N
OPENNESS TO EXPERIENCE	39.1	4.28354	40
CONSCIENTIOUSNESS	30.85	2.29325	40
EXTRAVERSION	27.325	3.12465	40
AGREEABLENESS	29.85	4.06707	40
NEUROTICISM	25.925	3.46697	40

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
153.05	155.331	12.46318	5

Appendix E Tables 2: SPSS results of Reliability and Validity of Narcissistic Personality Inventory (NPI) Scale adopted in the Questionnaire in Piloted Activities.

Case Processing Summary			
		N	%
Cases	Valid	40	100
	Excluded ^a	0	0
	Total	40	100
a. Listwise deletion based on all variables in the procedure.			

Reliability Statistics	
Cronbach's Alpha	N of Items
0.851	40

Item Statistics			
	Mean	Std. Deviation	N
NARC_Q1R AUTHORITATIVENESS - Choose the one closer to your own feeling	1.9	0.304	40
NARC_Q2R EXHIBITIONISM - Choose the one closer to your own feeling	1.23	0.423	40
NARC_Q3R EXHIBITIONISM - Choose the one closer to your own feeling	1.45	0.504	40
NARC_Q4 SUPERIORITY - Choose the one closer to your own feeling	1.4	0.496	40
NARC_Q5 ENTITLEMENT - Choose the one closer to your own feeling	1.65	0.483	40
NARC_Q6R EXPLOITATIVENESS - Choose the one closer to your own feeling	1.53	0.506	40
NARC_Q7 EXHIBITIONISM - Choose the one closer to your own feeling	1.48	0.506	40
NARC_Q8R AUTHORITATIVENESS - Choose the one closer to your own feeling	1.85	0.362	40
NARC_Q9 SUPERIORITY - Choose the one closer to your own feeling	1.5	0.506	40
NARC_Q10 AUTHORITATIVENESS - Choose the one closer to your own feeling	1.75	0.439	40
NARC_Q11R AUTHORITATIVENESS - Choose the one closer to your own feeling	1.75	0.439	40
NARC_Q12R AUTHORITATIVENESS - Choose the one closer to your own feeling	1.58	0.501	40
NARC_Q13R EXPLOITATIVENESS - Choose the one closer to your own feeling	1.4	0.496	40
NARC_Q14R ENTITLEMENT - Choose the one closer to your own feeling	1.2	0.405	40
NARC_Q15 VANITY - Choose the one closer to your own feeling	1.2	0.405	40
NARC_Q16R EXPLOITATIVENESS - Choose the one closer to your own feeling	1.63	0.49	40
NARC_Q17 SELF SUFFICIENCY - Choose the one closer to your own feeling	1.35	0.483	40

NARC_Q18 ENTITLEMENT - Choose the one closer to your own feeling	1.3	0.464	40
NARC_Q19 VANITY - Choose the one closer to your own feeling	1.4	0.496	40
NARC_Q20 EXHIBITIONISM - Choose the one closer to your own feeling	1.25	0.439	40
NARC_Q21R SELF SUFFICIENCY - Choose the one closer to your own feeling	1.5	0.506	40
NARC_Q22 SELF SUFFICIENCY - Choose the one closer to your own feeling	1.48	0.506	40
NARC_Q23 EXPLOITIVENESS - Choose the one closer to your own feeling	1.33	0.474	40
NARC_Q24R ENTITLEMENT - Choose the one closer to your own feeling	1.4	0.496	40
NARC_Q25R ENTITLEMENT - Choose the one closer to your own feeling	1.33	0.474	40
NARC_Q26 SUPERIORITY - Choose the one closer to your own feeling	1.58	0.501	40
NARC_Q27R ENTITLEMENT - Choose the one closer to your own feeling	1.45	0.504	40
NARC_Q28 EXHIBITIONISM - Choose the one closer to your own feeling	1.33	0.474	40
NARC_Q29R VANITY - Choose the one closer to your own feeling	1.43	0.501	40
NARC_Q30R EXHIBITIONISM - Choose the one closer to your own feeling	1.48	0.506	40
NARC_Q31R SELF SUFFICIENCY - Choose the one closer to your own feeling	1.6	0.496	40
NARC_Q32 AUTHORITATIVENESS - Choose the one closer to your own feeling	1.55	0.504	40
NARC_Q33R AUTHORITATIVENESS - Choose the one closer to your own feeling	1.58	0.501	40
NARC_Q34R SELF SUFFICIENCY - Choose the one closer to your own feeling	1.58	0.501	40
NARC_Q35 EXPLOITIVENESS - Choose the one closer to your own feeling	1.5	0.506	40
NARC_Q36R AUTHORITATIVENESS - Choose the one closer to your own feeling	1.43	0.501	40
NARC_Q37R SUPERIORITY - Choose the one closer to your own feeling	1.38	0.49	40
NARC_Q38 EXHIBITIONISM - Choose the one closer to your own feeling	1.23	0.423	40
NARC_Q39R SELF SUFFICIENCY - Choose the one closer to your own feeling	1.45	0.504	40
NARC_Q40 SUPERIORITY - Choose the one closer to your own feeling	1.55	0.504	40

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
58.88	53.599	7.321	40

Appendix E Tables 3: SPSS results of Reliability and Validity of UK Survey of SME Finance (UKSMEF) Scale adopted in the Questionnaire in Piloted Activities

Case Processing Summary			
		N	%
Cases	Valid	40	100
	Excluded ^a	0	0
	Total	40	100
a. Listwise deletion based on all variables in the procedure.			

Reliability Statistics	
Cronbach's Alpha	N of Items
0.1	4

Item Statistics			
	Mean	Std. Deviation	N
SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt in acquiring financing?	1	0	40
EXTERNAL_FUNDING_DIFFICULT_YES_NO - Did you consider external funding decision a difficult process?	1.68	0.526	40
FUNDING_PREFERENCE - Which do you prefer , internal or external funding?	1.28	0.452	40
VALUE_OF_EXTERNAL_FUNDING RECEIVED - How much external funding did you acquire?	2.73	1.987	40

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
6.68	4.789	2.188	4

Appendix F- SPSS Regression Analysis Hypothesis 1 (H₁) – 10(H₁₀)

Appendix F Tables 1: SPSS results of Hypothesis 1(H₁): Null and Alternative

- **H₀₁:** There is no significant association between narcissism and openness to experience amongst UK entrepreneurs.
- **H₁₁:** There is a significant association between narcissism and openness to experience amongst UK entrepreneurs.

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	OPENNESS TO EXPERIENCE ^b	.	Enter
a. Dependent Variable: NARCISSISM2			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.314 ^a	0.099	0.095	7.48362

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1517.874	1	1517.874	27.103	<.001 ^b
	Residual	13889.15	248	56.005		
	Total	15407.024	249			

Coefficients ^a						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	31.747	3.986		7.964	<.001
	OPENNESS TO EXPERIENCE	0.554	0.106	0.314	5.206	<.001

a. Dependent Variable: NARCISSISM-NPI40

Appendix F Tables 2: SPSS results of Hypothesis 2(H₂): Null and Alternative

- **H₀₂:** There is no significant association between narcissism and conscientiousness amongst UK entrepreneurs.
- **H₁₂:** There is a significant association between narcissism and conscientiousness amongst UK entrepreneurs.

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	CONSCIENTIOUSNESS ^b	.	Enter

a. Dependent Variable: NARCISSISM- NPI40

b. All requested variables entered.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.065 ^a	0.004	0	7.86548

a. Predictors: (Constant), CONSCIENTIOUSNESS

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64.302	1	64.302	1.039	.309 ^b
	Residual	15342.722	248	61.866		
	Total	15407.024	249			

a. Dependent Variable: NARCISSISM -NPI 40

b. Predictors: (Constant), CONSCIENTIOUSNESS

Coefficients ^a						
Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	46.342	5.916		7.833	<.001
	CONSCIENTIOUSNESS	0.196	0.192	0.065	1.019	0.309

Appendix F Tables 3: SPSS results of Hypothesis 3(H₃): Null and Alternative

- **H₀₃:** There is no significant association between narcissism and extraversion amongst UK entrepreneurs.
- **H₁₃:** There is a significant association between narcissism and extraversion amongst UK entrepreneurs.

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	EXTRAVERSION ^b	.	Enter

a. Dependent Variable: NARCISSISM2

b. All requested variables entered.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.314 ^a	0.099	0.095	7.48352
a. Predictors: (Constant), EXTRAVERSION				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1518.269	1	1518.269	27.11	<.001 ^b
	Residual	13888.755	248	56.003		
	Total	15407.024	249			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	28.684	4.57		6.276	<.001
	EXTRAVERSION	0.895	0.172	0.314	5.207	<.001

a. Dependent Variable: NARCISSISM2

Appendix F Tables 4: SPSS results of Hypothesis 4(H₄): Null and Alternative

- **H₀₄:** There is no significant association between narcissism and agreeableness amongst UK entrepreneurs.
- **H₁₄:** There is a significant association between narcissism and agreeableness amongst UK entrepreneurs.

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	AGREEABLENESS ^b	.	Enter
a. Dependent Variable: NARCISSISM2			
b. All requested variables entered.			

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.157 ^a	0.025	0.021	7.78434
a. Predictors: (Constant), AGREEABLENESS				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	379.221	1	379.221	6.258	.013 ^b
	Residual	15027.803	248	60.596		
	Total	15407.024	249			

a. Dependent Variable: NARCISSISM2

b. Predictors: (Constant), AGREEABLENESS

Coefficients ^a						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	41.24	4.469		9.228	<.001
	AGREEABLENESS	0.389	0.156	0.157	2.502	0.013

a. Dependent Variable: NARCISSISM2

Appendix F Tables 5: SPSS results of Hypothesis 5(H₅): Null and Alternative

- **H₀₅:** There is no significant association between narcissism and neuroticism amongst UK entrepreneurs.
- **H₁₅:** There is a significant association between narcissism and neuroticism amongst UK entrepreneurs.

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	NEUROTICISM ^b	.	Enter

a. Dependent Variable: NARCISSISM2

b. All requested variables entered.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.075 ^a	0.006	0.002	7.85957

a. Predictors: (Constant), NEUROTICISM

ANOVA ^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	87.357	1	87.357	1.414	.236 ^b
	Residual	15319.667	248	61.773		
	Total	15407.024	249			
a. Dependent Variable: NARCISSISM2						
b. Predictors: (Constant), NEUROTICISM						

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	56.808	3.78		15.029	<.001
	NEUROTICISM	-0.174	0.146	-0.075	-1.189	0.236
a. Dependent Variable: NARCISSISM2						

Appendix F Tables 6: SPSS results of Hypothesis 6(H₆): Null and Alternative

- **H₀₆:** There is no significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs.
- **H₁₆:** There is a significant relationship between narcissism and the Big Five personality traits amongst UK entrepreneurs.

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	NEUROTICISM, OPENNESS TO EXPERIENCE, AGREEABLENESS, CONSCIENTIOUSNESS, EXTRAVERSION ^b	.	Enter
a. Dependent Variable: NARCISSISM -NPI40			

b. All requested variables entered.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.415 ^a	0.172	0.155	7.22885

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2656.479	5	531.296	10.167	<.001 ^b
	Residual	12750.545	244	52.256		
	Total	15407.024	249			

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.788	6.716		3.691	<.001
	OPENNESS TO EXPERIENCE	0.409	0.112	0.232	3.649	<.001
	CONSCIENTIOUSNESS	-0.007	0.199	-0.002	-0.033	0.974
	EXTRAVERSION	0.668	0.194	0.234	3.444	<.001
	AGREEABLENESS	0.198	0.17	0.08	1.166	0.245
	NEUROTICISM	-0.421	0.149	-0.182	-2.818	0.005

Appendix F Tables 7 SPSS Results of Hypothesis 7 (H₇): Null and Alternative

- **H₀₇:** Narcissism does not significantly influence the preference for internal versus external funding amongst UK entrepreneurs.
- **H₁₇:** Narcissism significantly influences the preference for internal versus external funding amongst UK entrepreneurs.

Case Processing Summary			
Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	250	100
	Missing Cases	0	0
	Total	250	100
Unselected Cases		0	0
Total		250	100

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding	
Original Value	Internal Value
Internal source of funding, personal funds, family and friends	0
External source of funding, bank loans, equity form investors	1

Classification Table ^{a,b}			
	Observed	Predicted	
		FUNDING_PREFERENCE - Which do you prefer , internal or external funding?	Percentage Correct

		Internal source of funding , personal funds , family and friends	External source of funding , bank loans, equity form investors	
Step 0	FUNDING_PREFERENCE - Which do you prefer , internal or external funding?	Internal source of funding , personal funds , family and friends	210	0 100
		External source of funding , bank loans, equity form investors	40	0 0
	Overall Percentage			84
a. Constant is included in the model.				
b. The cut value is .500				

Variables in the Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-1.658	0.173	92.391	1	<.001 0.19

Variables not in the Equation					
	Variables	NARCISSISM2	Score	df	Sig.
Step 0	Variables	NARCISSISM2	4.08	1	0.043
	Overall Statistics		4.08	1	0.043

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	3.934	1	0.047
	Block	3.934	1	0.047
	Model	3.934	1	0.047

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	215.901 ^a	0.016	0.027

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test				
Step	Chi-square	df	Sig.	
1	9.303	8		0.317

Contingency Table for Hosmer and Lemeshow Test						
		FUNDING_PREFERENCE - Which do you prefer, internal or external funding? = Internal source of funding, personal funds, family and friends		FUNDING_PREFERENCE - Which do you prefer, internal or external funding? = External source of funding, bank loans, equity form investors		Total
		Observed	Expected	Observed	Expected	
Step 1	1	19	17.94	1	2.06	20
	2	20	20.424	3	2.576	23
	3	19	21.079	5	2.921	24
	4	21	19.149	1	2.851	22
	5	19	17.253	1	2.747	20
	6	17	17.962	4	3.038	21
	7	23	26.092	8	4.908	31
	8	20	21.44	6	4.56	26
	9	19	17.672	3	4.328	22

	10	33	30.988	8	10.012	41
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Classification Table ^a						
		Predicted				
		FUNDING PREFERENCE - Which do you prefer , internal or external funding?			Percentage Correct	
Observed		Internal source of funding , personal funds , family and friends	External source of funding , bank loans, equity form investors			
Step 1	FUNDING_PREFERENCE - Which do you prefer , internal or external funding?		210	0	100	
	External source of funding , bank loans, equity form investors	40	0	0		
	Overall Percentage					84
a. The cut value is .500						

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1 ^a	NARCISSISM2	0.042	0.021	3.989	1	0.046	1.043	1.001	1.087
	Constant	-3.908	1.158	11.383	1	<.001	0.02		
a. Variable(s) entered on step 1: NARCISSISM2.									

Appendix F Tables 8 SPSS Results of Hypothesis 8a (H8a): Null and Alternative

- **H_{08a}:** Amongst narcissistic UK entrepreneurs, openness to experience does not significantly influence preference for external funding.
- **H_{18a}:** Amongst narcissistic UK entrepreneurs, openness to experience significantly influences preference for external funding.

Case Processing Summary			
Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	250	100.0
	Missing Cases	0	0.0
	Total	250	100.0
Unselected Cases		0	0.0
Total		250	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding	
Original Value	Internal Value
Internal source of funding , personal funds , family and friends	0
External source of funding , bank loans, equity form investors	1

		Classification Table ^{a,b}		
		Predicted		
		FUNDING_PREFERENCE - Which do you prefer , internal or external funding?		Percentage Correct
Observed		Internal source of funding , personal funds , family and friends	External source of funding , bank loans, equity form investors	
Step 0	FUNDING_PREFERENCE - Which do you prefer , internal or external funding?			
	210	0	100.0	
		40	0	0.0

		equity form investors			
	Overall Percentage				84.0
a. Constant is included in the model.					
b. The cut value is .500					

Variables in the Equation						
		B	S.E.	Wald	df	Sig.
Step 0	Constant	-1.658	0.173	92.391	1	<.001
						0.190

Variables not in the Equation						
			Score	df	Sig.	
Step 0	Variables	NARCISSISM2		4.080	1	0.043
		OPENNESS TO EXPERIENCE		0.030	1	0.862
Overall Statistics			4.315	2	0.116	

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	4.169	2	0.124
	Block	4.169	2	0.124
	Model	4.169	2	0.124

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	215.666 ^a	0.017	0.028
a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.			

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	16.291	8	0.038

Contingency Table for Hosmer and Lemeshow Test						
		FUNDING_PREFERENCE - Which do you prefer , internal or external funding? = Internal source of funding , personal funds , family and friends		FUNDING_PREFERENCE - Which do you prefer , internal or external funding? = External source of funding , bank loans, equity form investors		Total
		Observed	Expected	Observed	Expected	
Step 1	1	24	22.489	1	2.511	25
	2	22	22.143	3	2.857	25
	3	22	22.779	4	3.221	26
	4	23	21.682	2	3.318	25
	5	21	21.390	4	3.610	25
	6	22	21.131	3	3.869	25
	7	15	20.811	10	4.189	25
	8	20	20.296	5	4.704	25
	9	24	19.718	1	5.282	25
	10	17	17.562	7	6.438	24

Observed		Predicted			Percentage Correct
		FUNDING_PREFERENCE - Which do you prefer , internal or external funding?			
Step 1	Internal source of funding , personal funds , family and friends	External source of funding , bank loans, equity form investors			
	FUNDING_PREFERENCE - Which do you prefer , internal or external funding?	Internal source of funding , personal funds , family and friends	210	0	100.0
		External source of funding , bank loans, equity form investors	40	0	0.0
Overall Percentage					84.0

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	NARCISSISM2	0.046	0.022	4.173	1	0.041	1.047
	OPENNESS TO EXPERIENCE	-0.020	0.041	0.235	1	0.628	0.980
	Constant	-3.351	1.624	4.258	1	0.039	0.035
a. Variable(s) entered on step 1: NARCISSISM2, OPENNESS TO EXPERIENCE.							

Appendix F Tables 8 SPSS Results of Hypothesis 8b (H8a): Null and Alternative

- **H_{08b}:** Amongst narcissistic UK entrepreneurs, extraversion does not significantly influence preference for external funding.
- **H_{18b}:** Amongst narcissistic UK entrepreneurs, extraversion significantly influences preference for external funding.

Case Processing Summary		
Unweighted Cases ^a	N	Percent
Selected Cases	Included in Analysis	250
	Missing Cases	0
	Total	250
Unselected Cases	0	0.0
Total	250	100.0
a. If weight is in effect, see classification table for the total number of cases.		

Dependent Variable Encoding	
Original Value	Internal Value
Internal source of funding , personal funds , family and friends	0
External source of funding , bank loans, equity form investors	1

Classification Table ^{a,b}	
Observed	Predicted

			FUNDING_PREFERENCE - Which do you prefer , internal or external funding?		Percentage Correct			
			Internal source of funding , personal funds , family and friends	External source of funding , bank loans, equity form investors				
Step 0	FUNDING_PREFERENCE - Which do you prefer , internal or external funding?	Internal source of funding , personal funds , family and friends	210	0	100.0			
		External source of funding , bank loans, equity form investors	40	0	0.0			
		Overall Percentage			84.0			
a. Constant is included in the model.								
b. The cut value is .500								

Variables in the Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-1.658	0.173	92.391	1	0.000

Variables not in the Equation					
			Score	df	Sig.
Step 0	Variables	NARCISSISM2	4.080	1	0.043
		EXTRAVERSION	0.246	1	0.620
	Overall Statistics		5.498	2	0.064

Omnibus Tests of Model Coefficients			
	Chi-square	df	Sig.
Step 1	Step	5.321	2
	Block	5.321	2
	Model	5.321	2

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	214.514 ^a	0.021	0.036

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	17.507	8	0.025

Contingency Table for Hosmer and Lemeshow Test						
		FUNDING_PREFERENCE - Which do you prefer , internal or external funding? = Internal source of funding , personal funds , family and friends		FUNDING_PREFERENCE - Which do you prefer , internal or external funding? = External source of funding , bank loans, equity form investors		Total
		Observed	Expected	Observed	Expected	
Step 1	1	26	23.576	0	2.424	26
	2	21	22.299	4	2.701	25
	3	19	21.116	5	2.884	24
	4	24	21.757	1	3.243	25
	5	23	21.475	2	3.525	25
	6	16	21.166	9	3.834	25
	7	23	20.766	2	4.234	25
	8	20	20.300	5	4.700	25
	9	20	20.329	6	5.671	26
	10	18	17.216	6	6.784	24

Classification Table ^a							
Observed			Predicted			Percentage Correct	
			FUNDING_PREFERENCE - Which do you prefer , internal or external funding?				
Step 1	FUNDING_PREF- ERENCE - Which do you prefer , internal or external funding?		Internal source of funding , personal funds , family and friends	External source of funding , bank loans, equity form investors			
			210	0	100.0		
			40	0	0.0		
Overall Percentage					84.0		

a. The cut value is .500

Variables in the Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	NARCISSISM2	0.051	0.022	5.129	1	0.024
	EXTRAVERSION	-0.079	0.068	1.346	1	0.246
	Constant	-2.263	1.820	1.545	1	0.214
a. Variable(s) entered on step 1: NARCISSISM2, EXTRAVERSION.						

Appendix F Tables 9 SPSS Results of Hypothesis 9 (H₉): Null and Alternative

- **H₀₉:** Personality traits (narcissism, openness to experience, and extraversion) do not significantly influence the likelihood of successfully obtaining external funding amongst UK entrepreneurs.
- **H₁₉:** Personality traits (narcissism, openness to experience, and extraversion) significantly influence the likelihood of successfully obtaining external funding amongst UK entrepreneurs.

Case Processing Summary			
Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	160	100
	Missing Cases	0	0
	Total	160	100
Unselected Cases		0	0
Total		160	100
a. If weight is in effect, see classification table for the total number of cases.			

Dependent Variable Encoding	
Original Value	Internal Value
Yes	0
No	1

Classification Table ^{a,b}						
	Observed	Predicted				
		SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt in acquiring financing ?		Yes		Percentage Correct
Step 0	SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt in acquiring financing ?	Yes	0		80	0
			0		80	100
	Overall Percentage					50
a. Constant is included in the model.						
b. The cut value is .500						

Variables in the Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	0	0.158	0	1	1

Variables not in the Equation					
			Score	df	Sig.
Step 0	Variables	NARCISSISM2	2.578	1	0.108
		OPENNESS TO EXPERIENCE	1.801	1	0.18
		EXTRAVERSION	1.915	1	0.166
Overall Statistics			3.81	3	0.283

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	3.854	3	0.278
	Block	3.854	3	0.278

	Model	3.854	3	0.278
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Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	217.953 ^a	0.024	0.032
a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.			

Classification Table ^a						
	Observed	Predicted			Percentage Correct	
		SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt in acquiring financing?	Yes	No		
Step 1	SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt in acquiring financing ?	Yes	44	36	55	
		No	31	49	61.3	
	Overall Percentage					58.1
a. The cut value is .500						

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	NARCISSISM2	-0.024	0.022	1.183	1	0.277	0.976
	OPENNESS TO EXPERIENCE	-0.026	0.041	0.399	1	0.528	0.975
	EXTRAVERSION	-0.04	0.062	0.426	1	0.514	0.96
	Constant	3.306	1.798	3.381	1	0.066	27.286
a. Variable(s) entered on step 1: NARCISSISM2, OPENNESS TO EXPERIENCE, EXTRAVERSION.							

Appendix F Tables 9 SPSS Results of Hypothesis 10 (H₁₀): Null and Alternative

- **H₁₀:** Personality traits (narcissism, openness to experience, extraversion) have no significant effect on funding success after controlling for socio-economic

characteristics (age, gender, education, ethnicity, business experience, business size and industry).

- **H₁₁₀:** Personality traits (narcissism, openness to experience, extraversion) significantly affect funding success after controlling for socio-economic characteristics (age, gender, education, ethnicity, business experience, business size and industry).

Case Processing Summary			
Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	160	100.0
	Missing Cases	0	0.0
	Total	160	100.0
Unselected Cases		0	0.0
Total		160	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding	
Original Value	Internal Value
Yes	0
No	1

Variables in the Equation						
		B	S.E.	Wald	df	Sig.
Step 0	Constant	0.000	0.158	0.000	1	1.000

Variables not in the Equation					
	Variables		Score	df	Sig.
Step 0		NARCISSISM2	2.578	1	0.108
		OPENNESS TO EXPERIENCE	1.801	1	0.180
		EXTRAVERSION	1.915	1	0.166
		AGE - What is your age?	0.034	1	0.855
		BIOLOGICAL GENDER - What is your biological gender?	0.338	1	0.561
		EDUCATION - What is your highest level of Education?	0.123	1	0.726

	ETHNICITY - What is your ethnicity?	1.335	1	0.248
	OWNER_NO_YEARS_EXPERIENCE - How many years of experience have you/has the owner had managing or owning a business, including this business?	3.110	1	0.078
	NO_OF_EMPLOYEES - How many people, including you, work in this business?	8.461	1	0.004
	INDUSTRY - What industry most related to the enterprise?	4.084	1	0.043
Overall Statistics		23.232	10	0.010

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	25.726	10	0.004
	Block	25.726	10	0.004
	Model	25.726	10	0.004

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	196.081 ^a	0.149	0.198
a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.			

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	13.834	8	0.086

Contingency Table for Hosmer and Lemeshow Test				
	SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt in acquiring financing ? = Yes	SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt in acquiring financing ? = No	Total	
	Observed	Expected	Observed	Expected

Step 1	1	14	13.439	2		2.561	16
	2	13	11.386	3		4.614	16
	3	13	10.302	3		5.698	16
	4	4	9.195	12		6.805	16
	5	9	8.352	7		7.648	16
	6	8	7.498	8		8.502	16
	7	4	6.715	12		9.285	16
	8	5	5.697	11		10.303	16
	9	5	4.458	11		11.542	16
	10	5	2.960	11		13.040	16

Classification Table ^a							
Observed				Predicted			
				SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt in acquiring financing ?		Percentage Correct	
				Yes		No	
Step 1	SUCCESSFUL_EXTERNAL_FUNDING - If you have received external funds, were you successful at the first attempt in acquiring financing ?		Yes	52		28	65.0
			No	25		55	68.8
	Overall Percentage						66.9
a. The cut value is .500							

Variables in the Equation								
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)
								Lower
Step 1 ^a	NARCISSISM2	-0.033	0.026	1.563	1	0.211	0.968	0.919
	OPENNESS TO EXPERIENCE	-0.029	0.046	0.403	1	0.525	0.971	0.888
	EXTRAVERSION	-0.083	0.070	1.418	1	0.234	0.920	0.803
	AGE - What is your age?	0.212	0.245	0.752	1	0.386	1.236	0.765
	BIOLOGICAL GENDER - What is your biological gender?	-0.321	0.330	0.948	1	0.330	0.726	0.380
	EDUCATION - What is your highest level of Education?	0.012	0.090	0.017	1	0.895	1.012	0.848
	ETHNICITY - What is your ethnicity?	0.115	0.047	5.838	1	0.016	1.121	1.022
								1.231

OWNER_NO_YEARS_EXPERIENCE - How many years of experience have you/has the owner had managing or owning a business, including this business?	-0.167	0.128	1.708	1	0.191	0.846	0.659	1.087
NO_OF_EMPLOYEES - How many people , including you, work in this business?	-0.657	0.278	5.590	1	0.018	0.518	0.301	0.894
INDUSTRY - What industry most related to the enterprise?	0.090	0.038	5.504	1	0.019	1.094	1.015	1.179
Constant	5.383	2.357	5.215	1	0.022	217.683		
a. Variable(s) entered on step 1: NARCISSISM2, OPENNESS TO EXPERIENCE, EXTRAVERTION, AGE - What is your age?, BIOLOGICAL GENDER - What is your biological gender?, EDUCATION - What is your highest level of Education?, ETHNICITY - What is your ethnicity?, OWNER_NO_YEARS_EXPERIENCE - How many years of experience have you/has the owner had managing or owning a business, including this business?, NO_OF_EMPLOYEES - How many people , including you, work in this business?, INDUSTRY - What industry most related to the enterprise? .								

Appendix G- Descriptive Statistics Presentation in Visual Graphs

