National College of Ireland

An Exploratory Study of the Barriers and Enablers That Influence The Career Advancement of Women to Leadership Roles in Fintech

By Tamara Becker-McNabola

National College of Ireland

A Dissertation submitted in part fulfilment of the requirements for the

MSc in International Business

Submitted to the National College of Ireland (August 2018)

Submission of Thesis to Norma Smurfit Library, National College of Ireland

Student name: Tamara Becker-McNabola Student number: 15045528

School: National College of Ireland   Course: MSc in International Business

Degree to be awarded:

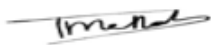MSc in International Business

Title of Thesis:

An exploratory study of the barriers and enablers that influence the career advancement of women to leadership roles in Fintech

One hard bound copy of your thesis will be lodged in the Norma Smurfit Library and will be available for consultation. The electronic copy will be accessible in TRAP (http://trap.ncirl.ie/), the National College of Ireland's Institutional Repository. In accordance with normal academic library practice all thesis lodged in the National College of Ireland Institutional Repository (TRAP) are made available on open access.

I agree to a hardbound copy of my thesis being available for consultation in the library. I also agree to an electronic copy of my thesis being made publicly available on the National College of Ireland's Institutional Repository TRAP.

Signature of Candidate:

For completion by the School:

The aforementioned thesis was received by_____

Date: _____

Abstract

Tamara Becker-McNabola: An Exploratory Study of the Barriers and Enablers that Influence the Career Advancement of Women to Leadership Roles in Fintech

This research presents results from an exploratory study investigating the barriers and enablers influencing the career advancement of women to leadership roles in Fintech. The perceptions of female leaders were obtained through the lived experiences of five women who achieved their leadership goals in Fintech. This study explored strategies that women in leadership used to climb the corporate ladder in Fintech and examined the characteristics of the industry itself. Themes and patterns were identified using thematic analysis. The main outcome of this study was the six main themes that emerged: (1) Self-Confidence, (2) Mentors/Sponsors, (3) Networking, (4) Inclusive Work Environment, (5) Social Undermining in the Workplace, (6) Conflict between Work and Family Life, and Assertiveness: a sub-theme that belongs to the overarching theme Self-Confidence. Examining and grouping these emergent themes has led to the development of two thematic maps. Thematic map 1 (Figure 5.2) illustrates the key enablers to female career advancement in Fintech and thematic map 2 (Figure 5.3) presents the key barriers to female career advancement in Fintech.

Submission of Thesis and Dissertation

National College of Ireland

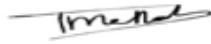**Research Students Declaration Form**

Name: Tamara Becker-McNabola

Student Number: 15045528

Degree for which thesis is submitted: Master of International Business

Material submitted for award

(a) I declare that the work has been composed by myself.

(b) I declare that all verbatim extracts contained in the thesis have been distinguished by quotation marks and the sources of information specifically acknowledged.

(c) My thesis will be included in electronic format in the College Institutional Repository TRAP (thesis reports and projects)

(d) I declare that no material contained in the thesis has been used in any other submission for an academic award.

Signature of research student:

Date: 24 August 2018

Acknowledgements

Table of Contents

List of Tables

List of Figures

List of Appendices

List of Acronyms

Fintech	Finance and technology
GDPR	General Data Protection Regulation
CEO	Chief Executive Officer
GT	Grounded theory
P	Participant
TA	Thematic analysis
S&P 500	The Standard and Poor's 500
WLB	Work-life balance

1 Introduction

This introduction serves three main purposes. First, it introduces the reader to the topic of gender and leadership in Fintech. Second, it highlights the main research question and four sub-questions. Third, the introduction provides a brief overview of each chapter.

1.1 Background of the Study

Although the proportion of women in leadership positions is slowly on the rise (World Economic Forum, 2017), studies that have explored the percentage of women in leadership roles in Fintech, (EY, 2017; DHR International, 2016) confirm that a substantial gender gap in Fintech remains. This dissertation therefore sets out to explore women's advancement in Fintech and seeks to identify the barriers and enablers that influence career progression to middle and top-level management.

Although, the issue of female leadership in Fintech has received considerable attention in the media, to date, little scholarly research has been published in this area. A systematic search of academic papers (Table 2.1) has revealed that only one peer-reviewed journal paper touched on the gender gap issue in Fintech, which justifies a great need research in this area.

1.2 Research Questions

This study uses exploratory research to examine female advancement to leadership positions in Fintech and seeks to address the following research question:

What are the barriers and enablers that influence the career advancement of women to leadership roles in Fintech?

The following sub-questions were designed to help answer the main research question:

1. *What are the barriers to career advancement in male-dominated spaces?*

2. *What career strategies do women in Fintech use to advance to leadership positions?*

3. *Are there programmes or initiatives in place in Fintech companies to encourage gender balance?*

4. *Are there unique characteristics of Fintech that influence female advancement?*

1.3 Structure of the Dissertation

The structure of this dissertation is presented in seven chapters. Chapter 1 outlines the background of the study and provides an overview of chapters.

Chapter 2 presents an up-to-date review of the literature, which considers the definition of Fintech and literature related to Fintech. This consists mainly of scholarly writings related to gender and leadership research.

Chapter 3 presents the main research question and outlines the objectives. This is followed by Chapter 4, which describes the research methodology. The study is exploratory in nature and primary data was collected through five semi-structured interviews.

Chapter 5 presents the findings through thematic analysis (TA) and Chapter 6 consists of a discussion of the research findings, which link back to the literature cited in the literature review.

Chapter 7 is divided into four parts and revisits the research question, provides an overall conclusion, states the research limitations, and provides recommendations for future research.

2 Literature Review

2.1 Introduction

The purpose of this review is to identify the barriers and enablers that influence the career advancement of women to leadership roles, specifically focusing on Fintech. The literature review begins with an explanation of the phenomenon of Fintech and proposes a new definition to clarify its meaning in this dissertation. The next section discusses gender and leadership literature published since 1970 and examines the definitions for gender and leadership. This is followed by a section that examines the barriers and antecedents to women and career advancement, focusing on the perception of men and women in leadership positions, coupled with institutional factors that could influence women's career progression. In addition, this section reviews literature related to personal challenges faced by women in leadership roles and pays particular attention to work-life balance. The final part of the literature review examines women in leadership positions and focuses on the areas of finance and technology. In short, the literature review suggests that women employed in finance and technology still face barriers to career advancement, resulting in their underrepresentation in leadership roles.

Though extensive research has been carried out in areas such as finance and technology, studies to date have failed to deal adequately with the gender gap in Fintech and the academic literature on women in Fintech leadership positions remains scarce. This dissertation therefore sets out to examine the barriers and enablers that influence the career advancement of women to leadership roles in Fintech.

2.2 Definition of Fintech

The term "FinTech" or "Fintech" represents a portmanteau of the words "financial" and "technology". While there is no widespread agreement on the definition of Fintech (Dorfleitner, Hornuf, Schmitt and Weber, 2017), this broad phenomenon is generally associated with financial innovation (Zavolokina, Dolata and Schwabe,

2016) that concentrates on three main areas: new payments systems, advanced risk management, and alternative lending solutions (Langley and Leyshon, 2017). Although Fintech is a relatively new term, it is not a new phenomenon. Schueffel's (2016) research on the definition of Fintech highlights how Bettinger (1972) used it as an acronym for "financial technology" in 1972.

As the first discussions on Fintech appear to have emerged during the 1970s, and technology has made a major impact since that time, it would be safe to assume that the meaning of Fintech has also changed in the past few decades. Schueffel (2016) supports this view and argues that in different business contexts the term is often used ambiguously and inconsistently. Even though consensus is yet to be reached, the failure to agree on a single definition of Fintech has not stopped practitioners and scholars from using it.

The author also stresses the importance of providing an explanation when including the term Fintech in a paper. Such clarification should eliminate ambiguity and support the overall direction when conducting research. While various definitions of Fintech have previously been suggested (Dorfleitner et al., 2017; Schueffel, 2016; Bettinger, 1972), this dissertation gives an alternative definition for clarifying the meaning of Fintech:

> Fintech is any organisation within the finance sector that uses innovative technology to simplify operations and improve financial performance.

2.2.1   Literature Related to Fintech

A systematic search of peer-reviewed research papers in six databases, using the keywords "Fintech", "Fintech and Gender", "Fintech and Women" and "Fintech and Leadership", revealed that no peer-reviewed work relating to the research topic/question could be found. The researcher selected "all dates" and "all peer-reviewed content" and searched through "full text" rather than "title". The search terms were not case sensitive and an advanced search was used to provide more

accurate results. The results below show that in six databases, the word "Fintech" appeared 450 times in "All text". Furthermore, the search terms "Fintech and Leadership" showed 100 counts and "Fintech and Gender" and "Fintech and Women" appeared 51 and 34 times respectively.

Table 2.1 Counts of Fintech- related search terms in six databases

Database	Fintech	Fintech AND Gender	Fintech AND Women	Fintech AND Leadership
Emerald Insight	30	4	3	17
JSTOR	21	1	3	1
Sage Journals	27	6	1	12
Science Direct	126	14	9	16
Springer Link	148	19	6	13
Wiley Online Library	98	7	12	41
Total	450	51	34	100

It is important to note that only one peer-reviewed journal paper touched on the gender gap issue in Fintech and that there was no mention of women in leadership. This indicates that, despite the media attention, no-one, to the researcher's knowledge, has studied the career advancement of women to leadership roles in Fintech.

2.2.2   Fintech Gender Segregation

A Fintech census conducted by EY (formery known as Ernst & Young) (2017) showed that the Fintech industry in the United Kingdom (UK) employs a ratio of 29% female to 71% male staff. The company also conducted surveys to assess the executive headcount by gender and confirmed the following split:

Table 2.2 Fintech EY census 2017

Country	Male	Female
UK	83%	17%
Australia	87%	13%
France	91%	9%

The findings observed by EY (2017) mirror those of DHR International (2016), a global executive recruitment firm which confirmed that only 8% of women in Fintech are directors, as opposed to 22% of female directors in the banking industry. The above figures confirm a substantial gender gap in Fintech. When looking at the percentage of Fintech women in executive positions, there is a particularly sharp decline. The following section therefore examines gender and leadership literature published to date.

2.3 Gender and Leadership

As noted by Eagly and Heilman (2016), there has been a remarkable increase in studies that address gender and leadership issues. They highlight that approximately 3,000 journal articles have been published since 1970, 38% of which appeared after 2010. These findings match those observed by Fletcher (2004), who suggested a sharp rise in gender and leadership studies. Although these findings show an increased research interest in this area, the imbalance between men and women in leadership positions still remains. According to the World Economic Forum (2017), the proportion of women in leadership roles has risen by only 2% over the past decade. Given this slow increase, it is important to establish whether more can be done to attract women into leadership roles.

To date, most of the gender and leadership literature has focused on the discrimination that women encounter (Heilman, 2012; Eagly and Karau, 2002). Despite this increased attention, Rhee and Sigler (2015) identify that women in leadership roles continue to encounter workplace mistreatment, and argue that research should therefore focus more on changing workplace rules and the status quo.

Interestingly, Snaebjornsson and Edvardsson (2013) conducted a literature review and identified three areas of interest in relation to gender and leadership studies. Their findings show that only one area payed attention to obstacles encountered by women in the workplace. First, the researchers looked at differences in leadership styles between men and women. Second, their focus was on gender and the

effectiveness of leadership. Finally, they focused on the "glass ceiling", or obstacles that hinder women from accessing leadership positions. Furthermore, the authors highlight that there is a considerable amount of confusion when researchers use the term "gender" in the context of leadership styles. Their claim is supported by Diamond (2002), who confirms that the term has caused significant confusion amongst scholars and practitioners. Diamond (2002) also explains that the words "gender" and "sex" are often used interchangeably and therefore different meanings of the word "gender" can be found throughout contemporary literature. For this reason, an explanation provided by the World Health Organisation (WHO) is used here to specify the meaning of "gender".

Gender refers to the socially constructed characteristics of men and women, such as norms, roles and relationships of and between groups of women and men' (World Health Organisation, 2018).

Leadership, on the other hand, is more difficult to define. Silva (2016), who recently conducted a literature review, suggests that leadership is no longer a personal quality but a process of interactive influence that happens when individuals accept another person as their superior to achieve shared goals. Silva's (2016) definition indicates that leadership is a process that is marked by influence and only occurs in given circumstances. A question that then naturally arises is: "Will this benefit women if we consider leadership to be a process rather than a personal quality?" The findings by Eagly and Heilman (2016) and Rhee and Sigler (2015) reveal that there is a need for additional research in social science, particularly concerning workplace rules.

2.4 Barriers and Antecedents to Women and Career Advancement

2.4.1 Perceptions of Men and Women in Leadership Positions

The past 30 years have seen a slow increase in women taking up professional and managerial roles (Burke and Vinnicombe, 2006). According to Eagly and Carli (2007), this may be due to widely shared conscious and unconscious views about men and women. For example, there still exists the perception that men are more

capable in leadership positions than women. Similarly, Burke and Vinnicombe (2006) found that preventing bias and discrimination in the workplace has been rather challenging, as decision-makers often use subjective criteria when hiring staff, with men, in particular, being likely to make employment decisions based on gender. Burke and Vinnicombe (2006) suggest that this may be due to men feeling more comfortable working alongside other men. In addition, male employees often rate their female counterparts as less competent and less committed to their work. These findings further support Eagly and Carli's (2007) claim that people often perceive men to be more competent when it comes to leadership. Furthermore, this may explain why an increasing number of women turn to image consultants, voice coaches and public speaking advice with the expectancy to advance in their careers (Ibarra, Ely and Kolb, 2013). As the glass ceiling appears to be breaking for more women (Kiaye and Singh, 2013), it is vital to identify the career strategies used by successful women to get to the top (Saadin, Ramli, Johari and Harin, 2016).

2.4.2   Institutional Factors that Influence the Career Advancement of Women

2.4.2.1   The Glass Ceiling Effect

Studies of the glass ceiling are well documented and the term itself was first used by Hymowitz and Shellhardt (1986) who described the phenomenon in a *Wall Street Journal* article. Shellhardt and Hymowitz (1986) described that only a few women moved up the corporate ladder but then encountered an invisible barrier called the "glass ceiling". This real barrier women face in their careers often relates to organisational bias and discriminatory behaviour that prevents them from reaching the top (Eagly and Carli, 2007). Since 1986, many scholars have tried to explain the glass ceiling effect, using different theories such as the social role theory, the person-centered systems theory, the interaction theory, and the human capital theory, along with organisational theories (Kiaye and Singh, 2013). Despite all this attention, the glass ceiling remains in place and invisible to women with leadership aspirations.

Powell and Butterfield (2015) suggest that scholars need to examine the glass ceiling phenomenon closely for three reasons. First, this invisible barrier still causes

problems for companies, in terms of organisational effectiveness. For example, Human Resources (HR) still limit the number of potential candidates for managerial jobs, as they believe that male candidates would be more suitable. Second, the glass ceiling barrier could create issues from a fairness perspective. As an example, if decision-makers such as managers or HR continue to favour men over women because they believe men are more competent leaders, it would be considered an unfair and unjust management practice. Third, glass ceilings can damage a company's reputation and have an impact on revenue. Finally, the perception of a glass ceiling will make it difficult for organisations to attract and retain female leaders.

2.4.2.2   Mentorship

Management teams could do more to support women's leadership aspirations. Bass and Avololio (1994) believe that it is equally important for women to re-examine their views of what it means to be successful. Lenka, Gupta and Sahoo (2016) argue that having a female mentor at senior management level could provide much-needed support and motivate women to be successful. This view is strongly contested by Johnson and Smith (2018), who suggest that men should mentor women, as this gives them the opportunity to learn more about women's experiences in the workplace, thus diversifying their network and enhancing their interpersonal skills. Nonetheless, whether the mentors are male or female, a recent study by Hughes and Sheerin (2016) reveals that mentoring positively affects career advancement. Workplace mentoring can be highly beneficial, particularly when it concerns networking, gaining access to people and information, career advice, and on-the-job training. This raises the question of whether mentoring and networking were important factors for those women who have succeeded at senior level in Fintech.

2.4.2.3   Gender-diversity Programmes

Many large organisations have already implemented gender-diversity initiatives and succeeded in attracting more women into leadership positions. Although these

diversity initiatives have had a positive impact, the majority of women aspiring to become leaders have not been able to progress to the highest ranks of senior management. Tsusaka (2018) explains that despite the measures being put in place to improve gender diversity, companies are still not getting the results they hoped for and push for change. Tsusaka (2018) also refers to a study by Abouzahr, Garcia, Krentz, Tan, and Taplett (2017), who surveyed approximately 17,500 women across 21 countries to measure the effectiveness of diversity programmes. The most surprising aspect of this survey was that 91% of women confirmed their workplace had a diversity programme in place, though only 27% reported to have benefitted from such an intervention. These unexpected results indicate the need for further research.

2.4.3 Personal Challenges Faced by Women in Leadership Positions

2.4.3.1 Work-life Balance

Existing literature on work-life balance (WLB) generally investigates time management, role overload, and caring responsibilities (Gregory and Milner, 2008). Ezzedeen and Ritchey (2009) stress the importance of having a supportive social network at home, in the workplace, and through the local community. Similarly, Khan and Fazili (2016) argue that an encouraging network, e.g. supportive family members and a supportive work environment, could improve WLB and lead to better performance. This view is supported by Lyness and Judiesch (2014), who find that high levels of WLB positively influence the potential for career advancement. With that in mind, WLB and flexibility in the workplace appear to be gendered (Gregory and Milner, 2008). For example, when women choose flexibility, they are more likely to reduce working hours or obtain part-time work, while men often see flexibility as working from home (Gregory and Milner, 2008). In addition, there are male managers who automatically assume that female candidates may require additional time off, either due to pregnancy or other family commitments, and therefore decide not to hire or promote them (Maddock and Parkin, 1993). These findings suggest that WLB and career progression remain complex issues for women.

2.5 Women in Leadership

Bierema (2016) describes how men traditionally worked outside the home and assumed the role of the breadwinner. Conversely, women either stayed at home or occupied stereotyped female professions. Fortunately, times have changed and nowadays women take on other professions, including leadership roles. Bierema (2016) also highlights that even though women these days have the right education and the will to lead, men are still perceived as better candidates for leadership roles. However, when considering all leadership contexts, the results show that men and women do not differ in terms of leadership effectiveness (Paustian-Underdahl, Walker and Woehr, 2014).

2.5.1 Women in Finance and Technology Leadership

Financial institutions have employed women for many decades, but only since the 1980s have we seen the advancement of women into leadership positions (Jaekel and St. Onge, 2016). In 2017, the *Financial Times* reported that out of 25 international banks, only 24.4% of women were employed at senior management level (Noonan, Marriage and Jenkins, 2017). Scarborough (2018) argues that this slow increase is due mainly to employers no longer prioritising gender integration, which has also resulted in the wage gap decreasing at a slower pace.

Nonetheless, Scarborough (2018) does highlight that the representation of women in leadership positions worldwide is higher than ever before. Since the 1980s, almost 4.5 million new leadership positions have been created and women managed to secure most of them.

With regard to women in the technology industry, Kvochko (2016) explains that women's representation in technology has significantly slowed down and, in some cases, even decreased. A study by Catalyst (2018) confirms that 5% of women held Chief Executive Officer (CEO) positions at the Standards & Poor's 500 (S&P 500) companies in January 2018.

As these figures indicate that women in finance and technology are still in the minority, these women may experience stereotype threat (Steele and Aronson,

1995) or fear of being associated with negative stereotypes at work (Von Hippel, Sekaquaptewa and McFarlane, 2015). According to Steele and Aronson (1995), stereotype threat occurs when someone who is part of a group feels that because of their identity they could be judged or treated unfairly. One of the objectives of the present study was to discover whether women in Fintech, and particularly women in leadership positions, encounter similar barriers.

2.6   Conclusion and Research Gaps

A review of the literature reveals that there has been a remarkable increase in studies that address gender and leadership issues (Eagly and Heilman, 2016). Research up to this point has focused mainly on the discrimination encountered by women (Eagly and Karau, 2002; Heilman, 2012). In addition, several researchers (Eagly and Heilman, 2016; Rhee and Sigler, 2015) have highlighted the need for additional research in social science and particularly that concerning workplace rules. The researcher therefore considered that it would be advantageous to include questions relating to the workplace environment in the interview sheet, as part of the primary research process.

In terms of the glass ceiling effect, Saadin et al. (2016) suggest it is vital to identify the career strategies that women use to advance their careers. The literature review also revealed the importance of mentorship programmes and that gender-diversity initiatives are failing. As it was found that there was a need for further study and clarification, this dissertation not only focused on the barriers, but also explored the enablers that influence career advancement.

Finally, while most of the scientific literature reveals that women in finance and technology remain underrepresented in leadership positions, there is no mention of women in Fintech leadership. To fill this literature gap, this dissertation focused exclusively on female leaders in Fintech, to explore the barriers and enablers for career advancement in this male-dominated industry.

3   Research Questions and Objectives

3.1 Research Questions

The purpose of the study is to explore the factors that influence female career advancement to leadership roles in Fintech, by answering the following research question:

What are the barriers and enablers that influence the career advancement of women to leadership roles in Fintech?

The following sub-questions were developed to help answer the main research question:

1. *What are the barriers to career advancement in male-dominated spaces?*
2. *What career strategies do women in Fintech use to advance to leadership positions?*
3. *Are there programmes or initiatives in place in Fintech companies to encourage gender balance?*
4. *Are there unique characteristics of Fintech that influence female advancement?*

3.2 Research Objectives

As the main research question aims to explore the barriers and enablers that influence the career progression of women to leadership roles in Fintech, the following objectives were set to help gather data:

Research Objective 1: *to explore the different barriers to career advancement in a male-dominated industry.*

Research Objective 2: *to gain insights into the career strategies used by women who successfully obtained leadership roles in Fintech.*

Research Objective 3: *to understand if there are any programmes or initiatives that Fintech companies use to actively promote gender equality.*

Research Objective 4: *to explore if Fintech has any unique characteristics that influence female career progression.*

4   Research Methodology

4.1 Introduction

This chapter describes the research methodology adopted and outlines the exact steps that the researcher followed to address the research questions. Moreover, this study adopted the research onion (Saunders, Lewis and Thornhill, 2016, p. 124) to guide the researcher through the research process.

Figure 4.1 Research Onion - Saunders, Lewis and Thornhill (2016 , p. 124)
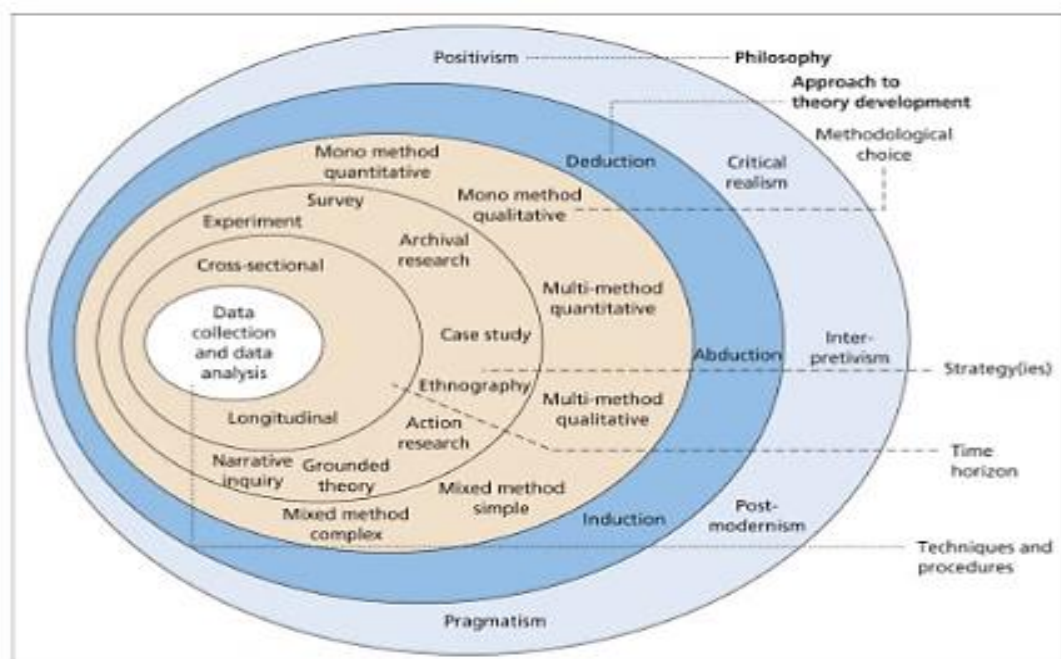
The research methodology chapter explains the research rationale, outlines the research aims and objectives, research philosophy, research approach, methodological choice, and time horizon, and concludes with details of the data collection methods and research limitations.

4.2 Research Rationale

A systematic literature search on Fintech has revealed that no papers on women's career advancement in Fintech have been published to date, which implies that this area is relatively unexplored. Therefore, this research seeks to address the gap in the existing literature by exploring the barriers and enablers to career progression in Fintech.

4.3 Research Aim

The overall aim of this dissertation is to address the following research question:

What are the barriers and enablers that influence the career advancement of women to leadership roles in Fintech?

In order to explore the research question the following sub-questions were investigated:

1. *What are the barriers to career advancement in male-dominated spaces?*

2. *What career strategies do women in Fintech use to advance to leadership positions?*

3. *Are there programmes or initiatives in place in Fintech companies to encourage gender balance?*

4. *Are there unique characteristics of Fintech that influence female advancement?*

4.4 Research Philosophy

According to Saunders et al. (2016), research philosophy can be referred to as a system of beliefs and assumptions relating to the establishment of knowledge. In order to understand the philosophy underpinning research, it is important to appreciate how the world can be viewed. To that end, an investigation was made into the possible ways the natural world could be viewed, as a guideline for how the research could be conducted.

4.4.1   Epistemological and Ontological Assumptions

Two important elements of research philosophy are epistemology and ontology (Saunders et al., 2016). The present study outlines the characteristics of these two elements below and highlights the differences to emphasise that this was an informed philosophical decision.

4.4.2   Epistemology

Quinlan, Zikmund, Babin, Carr and Griffin (2015) suggest that epistemology relates to knowledge, to what constitutes knowledge, and to the series of actions through which knowledge is created. Similarly, Bryman and Bell (2011) refer to epistemology as questions that should be regarded as knowledge, which researchers can agree upon in any discipline. The following sections discuss the two main approaches: positivism and interpretivism.

4.4.3   Positivism

Quinlan et al. (2015) describe positivism as one objective reality that is singular and unrelated to consciousness. Moreover, Saunders et al. (2016) describe positivism as typically deductive in nature, and which is mainly used in quantitative research. As this study follows an inductive approach to exploring women's career progression in Fintech, an interpretivist approach was considered to be appropriate.

4.4.4   Interpretivism

Interpretivism holds that all knowledge is about interpretation (Quinlan et al., 2015). Saunders et al. (2016) support this view and describe how interpretivism focuses on stories, narratives, interpretations and perceptions, whereas positivism

focuses primarily on measurable and observable facts. As narrative data was obtained to gain insights into the factors that influence career progression in Fintech, the study follows an interpretivist approach.

4.4.5 Ontology

Saunders et al. (2016) refer to ontology as a philosophical study about the nature of reality. In order to establish a suitable research strategy for this study, the researcher needed to determine what was consistent with reality and what constituted a fact (Reiter, 2013). Souba (2011) explains that in the context of leadership, ontology is associated with the essence of leadership. Similarly, Reiter's (2013) study found that ontology relates to the personal experiences of leaders, as opposed to leadership concepts and theories. What is interesting is that researchers with an interpretivist view may find the ontology of the social world questionable and even troublesome, as it is purely speculative and too abstract (Burrell and Morgan, 1979).

4.5 Research Approach

4.5.1 Deductive Approach

A deductive approach seeks to explain the causal effect between concepts and variables and often starts with the development of a theory, which is then rigorously tested (Bryman and Bell, 2011). Similarly, Antonakis, Schriesheim, Donovan, Gopalakrishna, Pellegrini and Rossomme (2011) suggest that a deductive approach would place the emphasis on the testing of hypotheses. Given that this study is exploratory in nature and that no hypotheses were tested, deduction was not considered appropriate for this study.

4.5.2 Inductive Approach

This study used an inductive approach to generate themes (Creswell, 2009) and to address the main research question. Rhodes, Brickman and Gelman's study (2008) found that an inductive approach is central to understanding human behaviour, as the knowledge we have is usually acquired via inductive reasoning, rather than via

observing people. It was considered that an inductive approach was well suited to this study, as the phenomenon under investigation had not yet been explored.

4.6   Philosophical Stance

In this study, the researcher's own beliefs and assumptions, coupled with the researcher's experience in the Fintech industry, led to the choice of research question and research design. Furthermore, it was decided that an interpretivist approach would be particularly well suited for this study, as interpretive research deals with all aspects of leadership (Bryman, 2004). Moreover, taking an interpretivist approach enabled the researcher to understand the context of the organisation through the eyes of the individuals working in that particular organisation (Greeff, 2015). Therefore, this approach allowed the researcher to understand how female leaders perceived and experienced career advancement within their respective Fintech organisations.

4.7   Research Methods

4.7.1 Methodological Paradigms

As methodological paradigms should match the purpose of the research (Pereira-Heath and Tynan, 2010), this thesis reviewed three different research methods: qualitative research, quantitative research, and mixed method research. With reflection on the available methodologies, the research paradigm was chosen, in line with the researcher philosophy and the research question. An overview of the options and suitability is considered below.

4.7.2 Quantitative Research Methods

Quantitative research methods use numerical data or data than can be coded numerically to investigate relationships between variables (Quinlan et al., 2015). As this study used semi-structured interviews, rather than numerical data, to get closer to the research participants, it had the opposite aim than that of a

quantitative study. Although quantitative research methods are commonly used in leadership studies (Stentz, Clark and Matkin, 2012), due to the exploratory nature of this study and the relatively small sample size, it was thought that a qualitative research method would be more appropriate.

4.7.3 Qualitative Research Methods

Quinlan et al. (2015) describe how qualitative research uses non-numeric data to represent thoughts, feelings, understandings and ideas. For this study, it was important to understand how women in Fintech made it to the top. In order to achieve this, the researcher needed to focus on the feelings, thoughts and experiences of female leaders and gain an understanding of their perceptions of leadership in a Fintech environment.

Folta, Seguin, Ackerman and Nelson (2014) explored the leadership characteristics among a group of women and found that a qualitative approach allowed them to analyse female leaders' behaviours and perceptions, and how these women experienced their leadership roles. Similarly, Soklaridis, Kuper, Whitehead, Ferguson, Taylor and Zahn (2017) used a qualitative approach to examine the experiences of female CEOs and found that in-depth qualitative interviews were highly effective, as they allowed the female leaders to share their personal stories in a private setting. As a result, the researchers were able to gather new information on leadership and gender bias. Considering the nature of the present research question, which has similarities to the research examples just mentioned, a qualitative research approach was considered to be most appropriate for collecting data.

4.7.4 Mixed Methods Approach

Research on leadership has historically relied on quantitative research methods. Although leadership researchers have used mixed methods as a way to advance their theories, as mentioned above, quantitative methods remain the most widely

used approach in leadership studies (Stentz et al., 2012). One of the main advantages of using a mixed methods approach is that it can provide more in-depth information, resulting in a better understanding of the research problem. However, in a study with an interpretivist paradigm, coupled with a research question that is exploratory in nature, would a mixed methods approach be more beneficial than a qualitative approach? Knollenberg and McGehee (2016) conducted a similar exploratory study under the interpretivist paradigm and suggested that mixed methods studies indeed have the potential to enhance research activities. However, they advised that great care should be taken when using both qualitative and quantitative research methods, for the following reasons. First, by using two collection methods and therefore maximising data, meaningful data could be missed. Second, obtaining quality data could reduce or limit the quantity of data. Finally, it can take a considerable amount of time to analyse and make meaning out of data when using a mixed methods approach. Although a mixed methods design would be useful for this type of study, due to time constraints and lack of mixed methods knowledge, the researcher proposes a mono method as a more suitable alternative.

4.7.5 Methodological Choice - Exploratory Study

Having considered the available research paradigms, the researcher deemed a qualitative approach, interpretive and exploratory in nature, to be most suitable. Saunders et al. (2016) mention that an exploratory study allows researchers to ask open questions, so that they can gain more knowledge about the research topic. This kind of study is particularly useful when researchers need clarification relating to an issue or phenomenon, but are unsure of the exact nature of the problem. As women's career advancement in Fintech had not yet been investigated and clarification was needed with regard to the barriers and enablers surrounding career progression in Fintech, it was thought that a study that was exploratory in nature would be highly beneficial. Saunders et al. (2016) also explain that exploratory research is flexible, easily adaptable, and can be conducted through literature reviews and interviews. This dissertation was appropriate for the

exploratory research design, as it began with a literature review and proposed to conduct semi-structured interviews, to gain new knowledge and uncover key themes.

4.8   Time Horizon

4.8.1   Cross-sectional Studies

Cross-sectional studies are observational studies taken at a particular time (Saunders et al., 2016), while longitudinal studies generally take longer, as researchers study change and development over an extended period of time (Bryman and Bell, 2011). This study was cross-sectional, rather than longitudinal, as the researcher sought to identify the barriers and antecedents that influenced women's career progression in Fintech over a short period of time. In this particular case, and mainly due to time constraints, it was considered that a cross-sectional study would be most appropriate.

4.9   Data Collection

For this study, the researcher chose an exploratory research design. At the time of the research, little was known about women's career progression to leadership roles in Fintech, so it was important to explore this relatively new phenomenon. The data collection methods that were used to obtain primary and secondary research data are outlined below.

4.9.1   Primary Research Data

Primary research data is original data that the researcher collects for a specific study and can be considered as new knowledge (Hox and Boeije, 2005). As the researcher proposed to conduct an exploratory study, collecting primary data through semi-structured interviews was deemed most appropriate. This was because semi-structured interviews would facilitate an in-depth understanding of the participants' experiences relating to leadership in Fintech. One drawback was the amount of time that it takes to transcribe and analyse comprehensive data after

an interview (Bryman and Bell, 2011). Nevertheless, its flexibility makes this data collection method so attractive and suitable for exploratory research.

4.9.2 Secondary Research Data

Secondary data, on the other hand, is research material that has been created by other researchers and made available for reuse (Hox and Boeije, 2005). Secondary research data for this study was collected through peer-reviewed academic journals and gender-diversity reports.

4.9.3 Validity and Reliability

As qualitative research differs from quantitative research, Lincoln and Guba (1985) and Guba and Lincoln (1994) suggest an alternative way of assessing qualitative studies. More specifically, two primary criteria for assessing qualitative research are proposed: trustworthiness and authenticity. Whether using validity and reliability or trustworthiness and authenticity, researchers must ensure that reporting is accurate and reliable (Saunders et al., 2016). However, Golafshani (2003) explains that due to the nature of qualitative research itself, testing the concept's reliability and validity may not be as simple. This view is supported by Leung (2015), who argues that testing reliability and validity in qualitative research remains challenging and suggests that consistency is key. The question that naturally arises is: "Why is it so challenging for qualitative researchers to test validity and reliability?" Golafshani (2003) explains that in quantitative research, credibility depends on the instrument construction, whereas credibility in qualitative research depends mainly on the ability and efforts of the researcher. Moreover, Metso and Le Feuvre (2006) highlight that in social science studies particularly, testing reliability and validity has been proved to be difficult, as some degree of bias is always present.

As this study relates to gender and leadership, there could be unconscious bias, as the researcher as well as the research participants are all female. Stebbins (2001) explains that validity in exploratory research significantly differs from that in quantitative research, as it is strongly influenced by the representativeness of the

sample group. For instance, if the researcher had access to the whole population of interest, that is, all female leaders currently employed in the Fintech industry, then the representativeness of this sample group would be 100%. As the results from this study relate to a sample of five female leaders, this may not be representative of the larger population. With regard to reliability, Reiter (2013) recommends that exploratory studies should be conducted in a transparent and honest manner, whereby the researcher follows guidelines to ensure reliability of the research findings.

4.9.4 Interviews

Due to the exploratory nature of the study, the researcher opted for semi-structured interviews. Saunders et al. (2016) describe how unstructured interviews are typically informal and used mainly to explore topics of interest. For this study, the researcher prepared a list with eight key questions that emerged from the literature review. However, there was the option for additional questions to be asked during the interview and the order could vary, depending on how the conversation flowed. Each participant was given a participant information sheet, including a consent form, to ensure informed consent was obtained prior to the interview. The interviews commenced once both forms had been signed and audio-recording was only used if the participant had given both written and verbal consent. As the interviews were informal and participants were encouraged to speak freely about their experiences, the researcher was obliged to ensure anonymity and confidentiality at all times. This included privately storing data and retaining data in accordance with the EU General Data Protection Regulation (Official Journal of the European Union, 2016).

4.10 Research Sample

The sample size was relatively small, as the researcher interviewed only female leaders employed in Fintech. In relation to the target population, even though the exact number is unknown, a report by Auwera, Maule and Duhaime (2015) shows

that there was only one female CEO listed in the European top 50 Fintech companies in 2015. This suggests that the target population is likely to be lower than 5% across the European Union (EU). For this study, the researcher interviewed five female leaders in the Fintech industry who were all based in Dublin, Ireland.

As primary data was obtained through semi-structured interviews, the researcher used non-probability sampling. Tansey (2007) explains that when researchers use non-probability sampling, they can select a specific type of research participant and leave certain sectors of the population out of the sample. For this reason, many scholars argue that non-probability sampling should only be used when resources are limited. In this exploratory study, resources were unquestionably limited, as the researcher had to meet the following sampling frame criteria:

All women in leadership roles (top and middle-level management)
employed in Fintech, which includes any organisation within the finance
sector that uses innovative technology to simplify operations and improve
financial performance.

Therefore, once initial respondents had been selected, the researcher asked the chosen respondents if they could recommend other respondents working in the same profession, thus effectively applying snowball sampling (Quinlan et al., 2015). Sadler, Lee, Lim and Fullerton (2010) describe how snowball sampling can be highly effective when research participants are difficult to reach. As this study had already established that female leaders in Fintech were underrepresented, it was considered that a snowball sampling method would be particularly suitable for sourcing research participants. Furthermore, the choice of sampling was in line with the method of Omar and Ogenyi (2004), who used snowball sampling to examine the role of women in management in the Civil Service. They found that snowball sampling was necessary to construct a sample, as there were very few women in management positions at the time. Additionally, Smith, Crittenden and Caputi (2012) applied a snowball sampling method when they researched women's beliefs about glass ceilings. Their focus was solely on women, as there was limited research on women's thoughts and beliefs concerning glass ceilings. For this study, sampling

was completed once the saturation point (Quinlan et al., 2015) had been reached and no new information could be obtained.

The nature of the study meant that all participants would be female and from leadership positions in Fintech, as outlined above. Interviews were conducted in a place chosen by the participants, so that they were in an environment conducive to answering freely.

4.11 Pilot Study

Although some researchers claim that pilot studies in qualitative research are unnecessary (Holloway, 1997), they could provide valuable information (Teijlingen, Rennie, Hundley and Graham, 2001). Novice researchers, particular, could benefit from conducting a pilot study, as they could practice their skills, anticipate issues, and adapt their research design accordingly (Doodey and Doodey, 2015). For this reason, the researcher conducted a test interview to try and identify any potential issues in advance. For example, it was thought that participants might not interpret the questions correctly, audio-recording might not work properly, or the researcher might have allocated insufficient time for each interview. Furthermore, as it can be challenging to conduct face-to-face interviews with participants in high-level positions, the researcher and participants involved were likely to benefit from a pilot study. The following page highlights how crucial a pilot study can be, the pilot interview questions are compared with the revised interview sheet.

Figure 4.2 Pilot Study Interview Questions

Pilot Study – Interview Questions

Q1. Could you describe your current role in Fintech?

Q2. Could you provide a brief description of your education and career path?

Q3. Could you describe how you attained this leadership position and if there were any significant obstacles you had to overcome?

Q4. How important is mentorship for aspiring women in Fintech? Did you have a mentor who helped you progress in your career?

Q5. How would you describe your work-life balance?

Q6. What is the work environment and culture like in your organisation?

Q7. Does your organisation have any gender diversity programs in place? If so, do you find these diversity initiatives effective?

Q8. Finally, what career strategies did you use to advance to corporate leadership and in your opinion, what strategies should women in Fintech consider to achieve career success?

Figure 4.3 Revised interview sheet after piloting

Revised Interview Sheet

Q1. Could you describe your current role in Fintech?

Q2. Could you provide a description of your education and career path?

Q3. Could you describe your path to leadership?
(a) Did you face any barriers along the way?
(b) What were key enablers for you along the way?

Q4. What is your view on the role of mentors, sponsors and/or role models for career progression in Fintech?

Q5. What is the work environment and culture like in your organisation?

Q6. How would you describe your work-life balance?

Q7. Does your organisation have any gender diversity programs in place? If so, do you find these diversity initiatives effective?

Q8. What advice would you give to women trying to climb the corporate ladder in Fintech?

After the preliminary study was conducted, various modifications had to be made. More specifically, the researcher had to rearrange Questions 5 and 6, to ensure that there was a flow to the interview. In addition, to encourage the research participants to speak freely, thus generating rich data, the researcher had to omit the word "brief" in Question 2. In the same vein, Questions 3 and 4 were modified to include enablers and sponsors and role models, respectively. Finally, it was necessary to simplify Question 8, to encourage research participants to provide more information.

4.12 Data Analysis

4.12.1 Thematic Analysis of Qualitative Research Data

Padgett (2017) describes how a revolutionary move towards clarifying and codifying qualitative research methods started in the 1980s and was influenced mainly by grounded theory (GT) (Strauss and Corbin, 1994; Glaser and Strauss, 1967). One common form of data analysis in qualitative research is thematic analysis (TA) (Braun and Clarke, 2006). Smith and Firth (2011) describe TA as an interpretive process, whereby the researcher systematically searches through data to identify patterns, with the aim to describe the phenomenon under investigation. As this study adopted an interpretivist approach, TA was a suitable method to identify key themes and address the research question. It is important to note that the process itself followed Braun and Clarke's (2006) six phases of thematic analysis, as presented in Table 4.1. Thus, the researcher began by transcribing data and reading this data repeatedly, followed by coding, searching and reviewing themes, then providing definitions, and finally naming the themes, with the aim to generate a report of the analysis. By following Braun and Clarke's (2006) process and using TA, the researcher could ensure good use of limited interview data, as well as being flexible when conducting text analysis with NVivo 12.

Table 4.1 Braun and Clarke's (2006) six phases of thematic analysis

Phases	Description of the process
1. Familiarising yourself with your data	Transcribing, reading and re-reading the data, noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing potential themes	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic „map" of the analysis.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

In order to ensure a trustworthy TA, the researcher addressed Lincoln and Guba's (1985) criteria for evaluating trustworthiness, as presented in Table 4.2, below.

Table 4.2 Lincoln and Guba's (1985) criteria for evaluating trustworthiness

Credibility	Confidence in the 'truth' of findings based on the research design, subjects/informants and context.
Transferability	Applicability of the findings in other contexts.
Dependability	Consistency and Replicability of the findings with the same subjects or in a similar context.
Confirmability	Degree of neutrality or the extent to which the findings of a study are shaped by the respondents and not researcher bias, motivation or interests.

4.13 Ethical Considerations

The researcher read, understood and adhered to the National College of Ireland's (2013) Ethical Guidelines and Procedures for Research involving Human Participants. Research was conducted in an ethical manner, e.g. respecting persons; protecting the wellbeing of participants; and employing fairness when selecting participants. In relation to the categorisation of ethical risk, this study posed little ethical risk to the individuals involved and therefore fell under Research Category A (Ethical Guidelines National College of Ireland, 2013).

4.14 General Data Protection Regulation

Conducting research under the General Data Protection Regulation (GDPR) means that:

> *consent should be given by a clear affirmative act establishing a freely given, specific, informed and unambiguous indication of the data subject's agreement to the processing of personal data relating to him or her, such as by a written statement, including by electronic means, or an oral statement (Official Journal of the European Union, 2016, p. 6).*

A detailed participant information sheet was created to ensure that the research participants had all the required information, including the identity and contact details of the data controller. This information, coupled with a consent form, can be found in Appendices 2 and 3. Additionally, to ensure data security and privacy, all data obtained has been anonymised and stored in a password-protected laptop and added to a password-protected folder.

4.15 Research Limitations

This research was limited due to several reasons. As Fintech is a relatively new industry, there is a small amount of scientific literature available on this topic. The need for further research became evident after a systematic search of peer-reviewed research papers (see Table 2.1). Furthermore, the sample was restricted by the availability of female Fintech leaders located in Ireland, which resulted in

limited access to the target population. In the same vein, validity is strongly influenced by the representativeness of the sample group (Stebbins, 2001), which suggests that the findings from a sample of five female leaders may not be representative of the larger population of female leaders in Fintech. Finally, as the dissertation only captures a moment in time, reports of progress in female advancement to leadership roles cannot be made, resulting in the loss of important research data.

5 Findings and Analysis

5.1 Introduction

This chapter outlines the results following the completion of thematic analysis of five semi-structured interviews. The main objective of the research was to identify the barriers and enablers that influence the career advancement of women to leadership roles in Fintech. Quotations from research participants have been added to provide narrative accounts and to illustrate the themes and sub-themes that emerged from this study. As mentioned in the Chapter 4, Nvivo 12, a qualitative data analysis software, was used to explore data, organise the themes, and develop visualisations of the data findings.

5.2 Findings (NVivo)

NVivo 12 proved crucial for the discovery of themes and sub-themes (details in section 5.3) and led to the development of two concept maps (see section 5.3.8). The next section outlines the findings per coding stage.

5.2.1   Stage 1. Pre-Coding Stage: Data Familiarisation

In keeping with Braun and Clarke's (2006) first phase of thematic analysis, the researcher first transcribed data, read the interview data extensively, and took notes. During this pre-coding stage, the researcher also ran a word frequency query in NVivo to explore which words were most commonly used. This allowed the researcher to visually interpret the text and generate a word cloud, as shown in Figure 5.1. Moreover, using the word frequency feature and generating a word cloud presented potential avenues for exploration and discovery. For example, a quick glance at the word cloud reveals that the words "mentors" and "sponsors" were commonly used, though the term "role models" did not appear in the word cloud. Considering that the researcher asked the interview participants about mentors, sponsors and role models (see Figure 4.3, Q4), this prompted the researcher to carefully analyse the raw data again. Further analysis revealed that research participants placed greater emphasis on mentors and sponsors than role models, which were mentioned sparingly. Moreover, the interview data reveals

(details in section 5.3.3) that the terms "mentors" and "sponsors" were grouped together by research participants.

Figure 5.1 word cloud in nvivo 12

5.2.2 Stage 2. Coding Stage: Bottom-Up Approach

This stage consisted of re-reading each transcript and coding emergent themes. By using a bottom-up approach, it was possible to select and add meaningful comments to containers called nodes. It is important to note that this stage covers phases 2, 3, 4 and 5 of Braun and Clarke's (2006) thematic analysis process, as shown in Table 4.1. Braun and Clarke's (2006) last phase, "producing the report", corresponds with NVivo's post-coding stage, which follows next.

5.2.3 Stage 3. Post-Coding Stage: Report Findings

Inductive thematic analysis led to the development of six emergent themes, which are presented, summarised, and ranked in order of importance. In other words, the most valuable insights on women's paths to leadership in Fintech are displayed

first. However, before these findings are presented, it is important to note the main characteristics of the interview participants under study.

5.2.4 Characteristics of Interview Participants

Interviews were held with five female participants in leadership positions in Fintech. The names of all five research participants have been anonymised, in order to protect participant confidentiality. They are thus named P1 (Participant 1) to P5.

As the researcher had determined that code saturation was reached after five interviews, no further volunteers were invited to participate in this study. It is important to observe that P1 and P4 had reached the highest level in Fintech's corporate world (also known as the C-Suite) and that excerpts of their transcripts were critical to this study.

Table 5.1 characteristics sample – interview participants

Participant Code	Sex	Location	Type of Fintech Platform	Level of Management
P1	Female	Dublin, Ireland	Currency Exchange	C-Suite
P2	Female	Dublin, Ireland	Currency Exchange	Middle Management
P3	Female	Dublin, Ireland	Payments	Middle Management
P4	Female	Dublin, Ireland	Alternative Finance	C-Suite
P5	Female	Dublin, Ireland	Alternative Finance	Middle Management

The above table again highlights that five research participants took part in this study and reiterates that probability sampling was not an option, as all individuals were female, worked in Fintech, and had leadership roles. Excerpts of their transcripts, coupled with emergent themes captured in NVivo 12, are presented in the next section.

5.3 Emergent Themes

A total of six main themes and one sub-theme were generated using Braun and Clarke's (2006) six phases of thematic analysis.

Table 5.2 hierarchy of emergent themes

Main Themes	Description
1. Self-confidence - Assertiveness (sub-theme)	Self-confidence and assertive communication are key for women aspiring to become leaders in Fintech.
2. Mentors/sponsors	Mentors and sponsors can provide guidance and support to women pursuing leadership roles.
3. Networking	Strategic networking is pivotal for women seeking to advance their careers in Fintech.
4. Inclusive work environment	An inclusive and supportive work environment that supports gender-diversity enabler career progression is vital for women seeking a leadership position.
5. Social undermining in the workplace	Colleagues undermining women with leadership aspirations can discourage these women from pursuing leadership positions.
6. Conflict between work and family life	Motherhood can cause conflict between work and life. Women in middle-management positions turn down more senior positions due to this conflict.

5.3.1 Main Theme 1: Self-Confidence

Self-confidence is key for women who aspire to become leaders in Fintech. Four out of five participants in this study highlighted self-confidence as the most important factor for career success in Fintech. Unsurprisingly, lack of self-confidence was identified as the most significant barrier to female leadership in Fintech. This makes self-confidence the overarching theme that reappears throughout this study. P1, who reached the C-Suite in Fintech, made the following comment in relation to confidence:

> *I'd say my main barrier, and I'm going to be very honest here, was probably myself. I know I wouldn't have put myself forward as much as probably my male colleagues would have and I would've always erred on the side of all that. I can't do, that rather than, of course I can do it. I push myself forward. So, I'd say I was my main barrier (P1).*

P3 and P4 had the following key advice for women pursuing leadership roles in Fintech:

> *You need to be confident, take initiative and speak up (P3).*

> *I'd say believe in yourself and your abilities. Don't take comments personally (P4).*

With the exception of P2, there appeared to be a high level of consensus between the remaining participants that self-confidence is a major factor in women's career advancement to leadership roles. However, P2 did state that women should "always ask" and, as such, made reference to the next sub-theme, assertiveness.

5.3.2 Sub-theme 1: Assertiveness

There is a strong link between assertiveness and self-confidence. However, as self-confidence is the overarching theme in this study, assertiveness was labelled as a sub-theme. Four out of five participants noted that assertiveness is important when pursuing a leadership role in Fintech. The next page will show two examples related to the sub-theme assertiveness.

I would say don't assume that, because a role on paper doesn't sound like there's flexibility, there isn't: always ask, there may be way around this (P2).

Speak up. Don't be afraid, don't care. Women feel they have to be 99% right before they can say anything and I don't: I just ask the question. If you don't agree with something, nail your colours to the mast (P5).

Assertive role models, such as mentors and sponsors, can help women become more assertive in their communication style, thus increasing self-confidence. When the researcher asked the participants about mentors, sponsors and role models, they all felt strongly about receiving guidance and support, either from a manager or leader within the company, or a trusted person outside of the organisation. The next section reviews snippets of interview data related to mentors and sponsors.

5.3.3 Main Theme 2: Mentors/Sponsors

During coding process, the categories mentors and sponsors were merged into one main theme as the interview participants frequently grouped mentors and sponsors together.

I think women in general don't push themselves forward and I think having a mentor or role model is hugely important for anybody. It doesn'tmatter what role they are in Fintech. Sometimes it's very hard to actually look inside yourself and go, "How do I challenge myself?" Whereas, I think somebody on the outside, they're giving you impartial advice; it just makes you think of things differently. It makes you view things differently. So I will be hugely in favour of people having a mentor from the time that they start working in Fintech (P1).

Mentoring and sponsorship for Fintech I think is important because the industry changes so quickly and you need that network and mentoring to make sure that you're on top of all the changes. So you know, you can obviously do some of it yourself, but there are certain things that could maybe go under your radar. As well as that, I would not be hugely technically minded, so for me it's good to have a mentor who does have that technical background: the technical expertise and can translate that jargon for me into layman's terms (P2).

> *Yes, key enablers were my great mentors and sponsors along the way,*
> *most of whom were male. And, good training and communication and*
> *understanding personality types really helped my confidence (P4).*

The above quotations reiterate the importance of mentors and sponsors for women in Fintech, whether it is to get that extra push in the right direction, or when more specialist support is required. For example, one participant mentioned how Fintech is both finance and technology, and that some women may not have experience in both fields. In fact, four out of five research participants confirmed they came from a financial background and had little or no experience in technology. Only one participant came from a technological background and had some experience in finance. This suggests that career advancement in Fintech may be more complex, and that mentors and sponsors could be crucial to women's career success. Having a mentor or sponsor also facilitates networking opportunities, to be covered in more detail below.

5.3.4   Main Theme 3: Networking

One of the main themes that emerged from the data was networking. Four out of five research participants recommended building networks.

> *I would say get a mentor and a network; and I would say have confidence in*
> *yourself (P1).*

> *You need to find a network of people you trust. I think that's very important*
> *(P3).*

> *Networking is important too. Make sure that people know who you are and*
> *belief in yourself (P5).*

Although their narratives did not provide detailed information about networking, there was a clear consensus among participants that networking is important, as it can increase women's exposure in Fintech. However, to build connections, women need to get out of their comfort zone, which again links back to the overarching theme "self-confidence". As an inclusive work environment can facilitate professional and social networking, this theme is discussed next.

5.3.5   Main Theme 4: Inclusive Work Environment

Three out of five participants described their working environment as inclusive and supportive. Interestingly, the male to female ratio reported by P1 shows that, contrary to popular belief, not all Fintech companies have a predominantly male leadership team. What is even more interesting is that the company in question is still in its start-up phase. This is encouraging for women seeking leadership positions in Fintech.

> *We're a Fintech but actually 40 percent of our staff are female. I think*
> *We have a relatively strong ratio, like it's not 50:50, but we're heading*
> *For 50:50. So we're at 40 percent. So the same in our leadership team.*
> *It's a 40:60 split (P1).*

> *The company is trying to retain its culture of approachability and*
> *open doors. So what I mean by that is, if somebody has an idea or a*
> *suggestion, it doesn't matter who they are: they can bring it to the*
> *table and it will be explore (P2).*

> *We have a LEAP programme and that's for women in leadership.*
> *I haven't personally signed up to one yet, but it is something am*
> *planning to do (P5).*

Through the narratives of these individuals, it becomes clear that the work environment is another important factor and certainly an enabler to women's career progression in Fintech. However, not all companies and/or departments are the same. The next section highlights how an unsupportive work environment can make the climb to the top even harder.

5.3.6   Main Theme 5: Social Undermining in the Workplace

One surprising finding from this study was the undermining in the workplace reported by three research participants. Duffy, Ganster and Pagon (2002, p. 332) describe social undermining as:

> *behavior intended to hinder, over time, the ability to establish and maintain*
> *positive interpersonal relationships, work-related success, and favorable*
> *reputation.*

Why does it occur? Reh, Tröster and Van Quaquebeke (2018) argue that social undermining and envy from co-workers arises due to future status threat. In other words, if the employee in question believes that they are potentially worse off than their colleague, regardless of their current standing, envy develops, resulting in social undermining. Therefore, it is a complex barrier which can lower self-confidence and prevent women from achieving their leadership goals.

> *It's a case of not allowing you to influence or not enable you to attend a meeting, and sort of going around; so it's not like you can kind put your finger on what's actually happening, but you know it's happening and the language with that team can be quite exclusive. Like, "Well done boys. Great job boys", or even more crass, like, "If you don't agree, put your balls on the table". I would then say, "I don't have any balls but would like to make a comment (P5).*

> *Funnily enough I would have faced barriers from colleagues, actually women. They weren't very helpful, even more when I became a team leader. I wasn't there very long, so they were a little bit jealous (P3).*

> *Yes. Jealous female colleagues made life difficult. Male colleagues try to undermine, using offensive comments about females who felt threatened by my good work (P4).*

After examining the quotations reproduced above, it appears that the statements of P3 and P4 have two things in common. Both participants mentioned "female colleagues" as a barrier and described these women as being jealous. The question then arises: "In a male-dominated workplace, why do some women make life difficult for other women?". Nevertheless, the experience of P5 was slightly different. Male colleagues, rather than female ones, were undermining her. Furthermore, P5's comments suggest that social undermining does have a negative impact on self-confidence.

> *So, there [are] some people [who] are like that and it surprised me. It was kind of – I don't know: what's the opposite of empowering? I felt really marginalised or minimalised. I felt I didn't really know where to go (P5).*

Dealing with difficult people, whether they are men or women, can be a significant hindrance to leadership. Another barrier that emerged from this study related to conflict between work and family life, particularly surrounding motherhood. This barrier is examined in more detail below.

5.3.7 Main Theme 6: Conflict between Work and Family Life

Quotations about WLB, narrated by participants in middle and top-management, have been added to provide greater clarity as to why conflict between work and family life exists. For example, P2, who is employed in middle-management commented:

I would say don't compromise your work-life balance. Fintech in its nature should be a flexible company. There should be working from home; availability certainly for some roles within Fintech: more so than in any of my previous roles or previous industries. Definitely, I think there's more flexibility in hours, again compared to other industries. So, I would say for a women, if you want is your family as well as work and a career, it is achievable (P2).

Conversely, participants who made it to top-level management did not experience the same level of flexibility:

Something that's always been a little more work, but my work-life balance is probably more work than life; and that's just with the role that I have, and also with me on a personal level as well (P1).

Not good: I work long hours and travel for work more than I want to and I feel pressured to do so (P4).

The above statements suggest that women who aspire to become leaders in Fintech will need to work long hours and may travel extensively, as it is the nature of top management. Therefore, regardless how much flexibility Fintech offers, progression to top-level management is likely to have an impact on WLB and therefore causes conflict between work and family life.

The narratives of the following two participants confirm that motherhood was their main reason for conflict between work and family life:

What barrier I have faced, and it's more a self-inflicted barrier, is since I had my children. I've kind of, suppose, had to focus on the work-life balance more than I had before. So, some examples of that is that I would have turned down more senior, better-paid positions, that would require longer working hours and greater flexibility, because I wasn't able to commit to those with having children (P2).

Work-life balance? Not ideal, but mainly because I am a mother too I have to manage family and work. Also, you feel that you have to prove yourself that you're dedicated to your job. So, if you have kids, it's not easy to combine all (P3).

Interestingly, there was no indication that the participants with children (P2 and P3) lacked self-confidence as a result of their conflict between work and family life. For this reason, the theme "conflict between work and family life" has been identified as an outlier in the study. Nonetheless, this theme is included in the second thematic map (see section 5.3.8 – Figure 5.3), as this factor appears to be a significant barrier for mothers in Fintech, who get "stuck in the middle".

5.3.8 Thematic Maps

To visualise the relationship between the themes, two thematic maps have been created. The first map (see Figure 5.2) presents an overview of key enablers to women's career advancement in Fintech and exposes how the overarching theme "self-confidence", and its sub-theme assertiveness", play a critical role in career advancement

Figure 5.2 thematic map 1 illustrating the key enablers to female career advancement
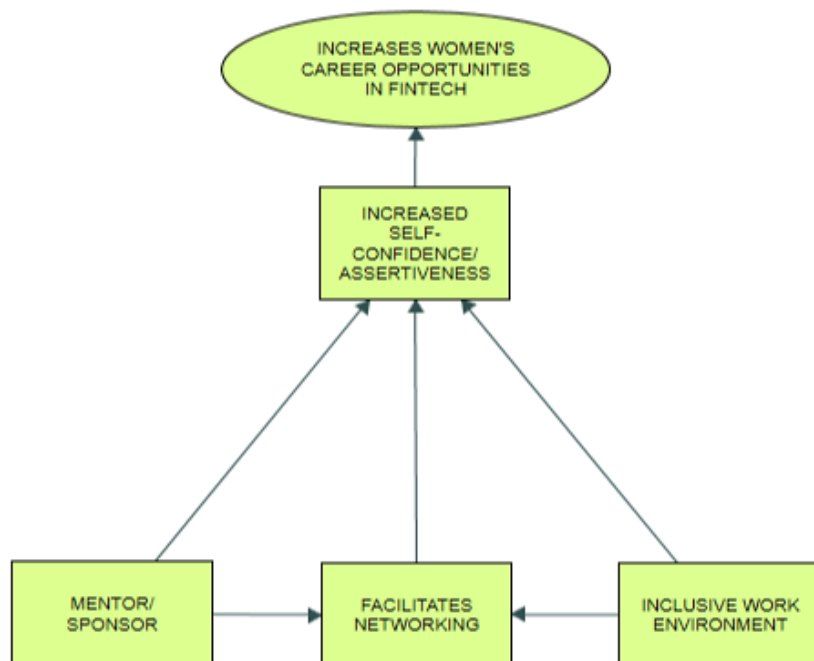
The second map (see Figure 5.3) illustrates the main barriers to progression to corporate management in Fintech and exposes how confidence again plays a significant role. In particular, social undermining can impact self-confidence in a negative way, which in turn negatively influences assertive communication. Moreover, this thematic map exposes the outlier in the study, in the main theme "conflict between work and family life". This theme could not be linked to the overarching theme "self-confidence", as the narratives fail to reveal a connection between WLB and self-confidence.

Figure 5.3 thematic map 1 illustrating the key barriers to female career advancement
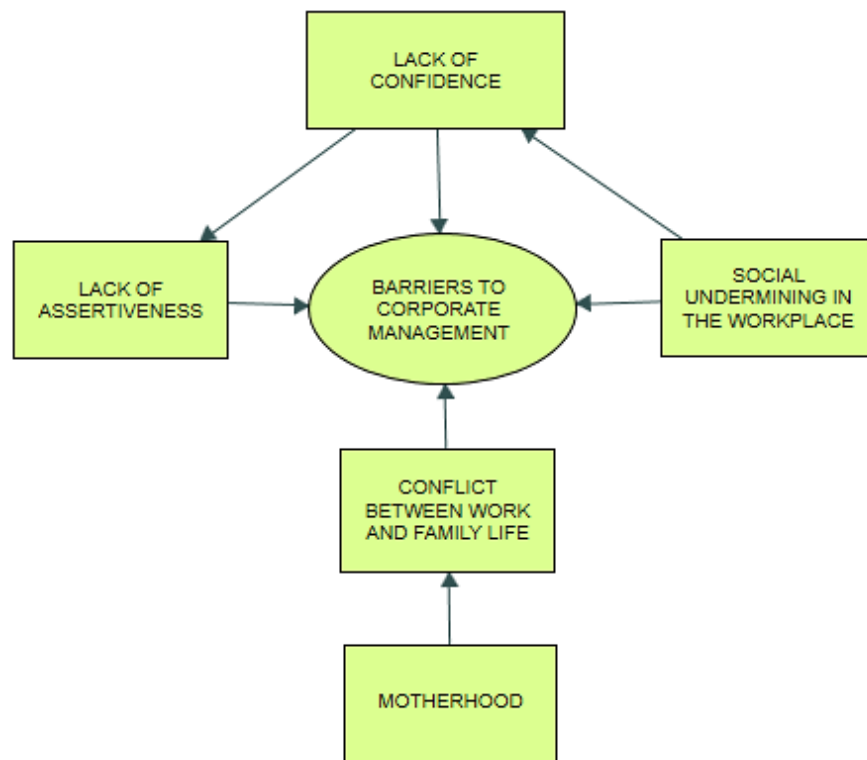
A discussion of the findings and how they relate to the literature review and research questions is presented in the next section.

6 Discussion of Findings

6.1 Main Theme 1: Self-confidence

One of the key findings in this thematic analysis was that the majority of themes all pointed to one core theme: "self-confidence". Interestingly, previous studies have reported that men tend to have higher levels of self-confidence than women and that this affects career success (Kirkwood, 2009). In a study which set out to determine gender-linked traits, Bakan (1966) found that there are two overarching human traits: the agentic and communal personality traits. Pratch and Jacobowitz (1996) refer to Bakan's (1966) concept and describe how women are expected to show increased levels of social, thus communal qualities, while men are expected to display higher levels of agentic behaviour (e.g. being independent and assertive) – traits that are likely to increase self-confidence. Considering Bakan highlighted, in 1966, that these gender-linked personality traits can influence career success, and 50 years later four out of five participants reveal that women need to display more agentic behaviour, it appears that it is extremely difficult for women to change their behaviour and achieve their leadership goals.

6.2 Sub-theme 1: Assertiveness

In an investigation into assertive and effective leadership, Ames (2009) found that managers and leaders often find it difficult to continuously get interpersonal assertiveness 'right'. Interestingly, Ames's (2009) study reveals that failed leaders are more likely to display extremely high or low levels of assertive behaviour. Figure 6.1 illustrates how increasing assertiveness can be beneficial, but also damaging. Therefore, it is important for Fintech women with leadership aspirations to get this balance right and to be aware of how damaging extremely high or low levels of assertiveness can be. Female leaders need to be assertive, without becoming overly so.

Figure 6.1 relationship between assertiveness and effectiveness, Ames (2009, p.116)
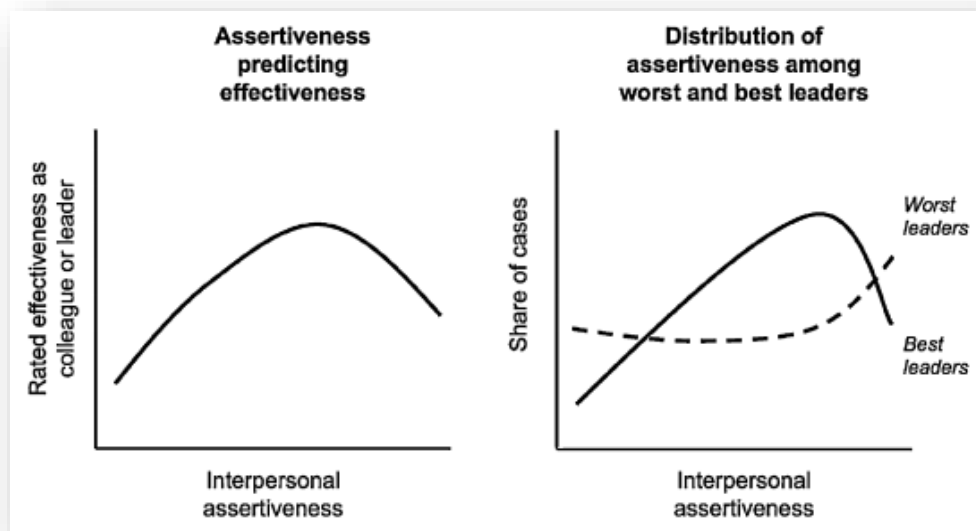
6.3 Main Theme 2: Mentors and Sponsors

The main findings highlight the importance of having a mentor or sponsor in Fintech. The three main reasons that were given for having a mentor or sponsor were:

1. To increase self-confidence/assertiveness.
2. To expand personal/business network.
3. To understand the technological side of the business.

It is important to note that the three reasons listed above helped the research participants to progress to leadership roles in Fintech. These findings correspond with the literature, which also revealed that mentoring positively affects career progression, as it increases networking opportunities (Johnson and Smith, 2018; Hughes and Sheerin, 2016) and can motivate women to be successful (Lenka, Gupta and Sahoo, 2016).

Surprisingly, three out of five research participants in this study mentioned that a male mentor helped them to achieve their leadership goals. Although these findings differ from some published studies (Sahoo and Lenka, 2016), they are consistent

with those of Johnson and Smith (2018), who suggest that men can be effective mentors to women.

6.4 Main Theme 3: Networking

The literature review highlighted that networking and gaining access to people and information can benefit women who aspire to become leaders in Fintech. The question that was raised was whether networking was an important factor for those women who succeeded in Fintech. The participants' narratives (see section 5.3.1 – 5.3.7) reveal that networking was indeed important, as it increased their exposure in Fintech, uncovered opportunities, and helped these women to achieve their leadership goals. Casciaro, Gino and Kouchaki (2016) describe how building professional relationships can lead to more business opportunities, faster career progression, a broader knowledge, and increased job satisfaction. Interestingly, their research has identified four ways to overcome reluctance to networking:

1. Focus on learning.
2. Identify common interests.
3. Think broadly about what you can give.
4. Find a higher purpose.

The above strategies are particularly useful for women who lack assertiveness and self-confidence, as they can help change their mindset.

6.5 Main Theme 4: Inclusive Work Environment

The findings from the thematic analysis reveal that not all Fintech companies have a predominantly male leadership team, and the majority of research participants found the work environment to be supportive and inclusive. However, as Fintech is a relatively new industry, little research has been conducted in this area (see section 2.2.1). Therefore, the theme "inclusive work environment", in the context of Fintech, could not be linked to any existing literature.

6.7 Main Theme 5: Social Undermining in the Workplace

Another finding in this study was social undermining in Fintech. Since the majority of research participants mentioned that their work environment was inclusive and supportive, it was a surprise to find that some work environments in Fintech can be quite toxic. Moreover, two participants had said that other women were the culprits. The literature review has already identified that female leaders continue to come across workplace mistreatment and that workplace rules need to be changed (Rhee and Sigler, 2015). Other studies addressing this issue have reported that women tend to target other women more frequently than they target men. A survey conducted by the Workplace Bullying Institute (2007) shows the following results:

Figure 6.2 Ratio of male/female bullying (Workplace Bullying Institute, 2007)
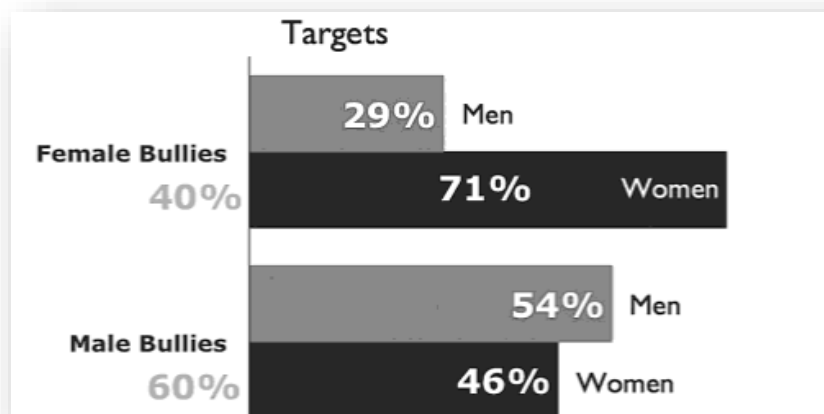
Another report by the Workplace Bullying Institute (2012) reveals that women believe they need to become aggressive in order to get ahead in male-dominated environments. Interestingly, the participants (in the present study) who experienced harassment from other women were not employed in the Fintech company that had a gender balance ranging 40:60 between women and men. Therefore, women with leadership aspirations may face more opposition and resistance when they are surrounded by very few women.

6.8 Main Theme 6: Conflict between Work and Family Life

Another significant finding emerging from this study was that mothers get stuck in middle management. Unsurprisingly, motherhood was the reason for not advancing and named as the main cause of conflict between work and family life. One participant described having children as a "self-inflicted barrier" to senior leadership roles (P2). These findings go hand in hand with the findings of the literature review, which revealed that it is crucial for women to have a support network at home, through the community, and in the workplace (Ezzedeen and Ritchey, 2009). A greater level of support is required at C-level, in particular, as senior executives often work long hours, travel frequently, and take less time off. As one senior executive commented, "more work than life; and that's just with the role that I have" (P1).

To conclude this dissertation, the next part connects existing literature and theory with the research questions.

7 Conclusions and Recommendations

The final chapter of this dissertation is divided into four parts. The first part considers the findings in light of the research quesiton; the second part discusses the conclusions that have been reached bearing in mind the extant literature; the third part discusses the limitations of the study; and the fourth part concludes with recommendations for future research.

7.1 Research Questions Revisited

The research questions for this dissertation were derived from the literature. The main research question that this study addressed was:

7.1.1 Main Research Question:

What are the barriers and enablers that influence the career advancement of women to leadership roles in Fintech?

The results of the study highlighted that the main barrier to career progression for women in Fintech was lack of self-confidence, coupled with lack of assertive behaviour. Ibarra et al. (2013) explain that women are more likely to step outside of their comfort zone and try out new behaviours once leadership capabilities improve, and the opportunities to display these leadership capabilities increase. However, if these opportunities do not present themselves, women will be discouraged from seeking out new opportunities and this will result in their diminished motivation and self-confidence. It is therefore important for women with leadership aspirations to network and reach out to suitable mentors and sponsors, who can offer support and guidance. Moreover, an inclusive work environment is more likely to provide opportunities for growth and leadership development. However, not all companies have a supportive and inclusive work environment. Several research participants have named social undermining as a barrier to career progression in Fintech, which prompts the question: "How can women in Fintech continue to establish and maintain positive relationships with colleagues, achieve career success and build favourable reputations (Duffy et al.,

2002) without being undermined by their peers?". As workplace mistreatment can significantly reduce self-confidence and prevent women from reaching the top, it is important to have an inclusive and supportive work environment.

Another significant barrier that emerged from this study was conflict between work and family after having children. Athanasopoulou, Cowan, Smets and Morris (2018) conducted a study to examine how a select group of women in top-level management had overcome their barriers. Surprisingly, the female CEOs interviewed said that a career break is not harmful, as long as women make a plan and return to the workforce. Moreover, while on leave, it is important that women remain engaged with the workplace, both socially and professionally. The study also highlights that organisations can provide long-term support through policy changes, thus allowing female leaders the time and space to raise a family. In relation to enablers that influence career advancement, the research participants in the present study found increased self-confidence, coupled with assertive behaviour, to be most important for career progression. In relation to existing literature, this was discussed in the previous sub-section (see section 7.1.1 page 47 – main barrier).

The research participants also highlighted the importance of mentors and sponsors in Fintech. Mentoring or sponsorship can help build confidence, improves women's visibility in the industry and fosters networking opportunities. Nevertheless, the female leaders that were interviewed by Athanasopoulou et al. (2018) took charge of their own personal and professional life and expected little outside support. They also confirmed that in comparison with their male counterparts, women are faced with a lack of mentors and sponsorship, and therefore need to establish their own networks. It is noteworthy that the participants in our study found networking of great importance. This suggests that the narrative accounts of female CEOs in the study by Athanasopoulou et al. (2018) are relatively consistent with the personal experiences of female leaders in the present study. It can be seen from the foregoing discussion that women do not always have a support network readily available. A supportive and inclusive work environment that encourages gender diversity is therefore highly beneficial for career advancement in Fintech.

7.1.2 Sub-research Question 1:

What are the barriers to career advancement in male-dominated spaces?

One signifcant barrier that emerged from the TA was the boys club attitude that exists in male-dominated spaces such as Fintech. Through the narratives of the research participants it became clear that some men in the Fintech industry did not allow their female counterparts to have an opinion. For example, comments such as "Well done boys. Great job boys" or "If you don't agree, put your balls on the table" during boardroom meetings automatically excluded these women from the conversation, thus making them feel unwelcome. This 'boys club' mentality is a glass ceiling (Shellhardt and Hymowitz, 1986) that prevents women from moving up the corporate ladder.

7.1.3 Sub-research Question 2:

What career strategies do women in Fintech use to advance to leadership positions?

This study has shown that women use mentors, sponsors and networking to advance to leadership positions in Fintech. However, if women want to access sponsorship or find a suitable mentor, they will need to take charge of their own career, rather than and waiting for opportunities to arise. This study has also shown that self-confidence and assertiveness play a major role in leadership development.

7.1.4 Sub-research Question 3:

Are there programmes or initiatives in place in Fintech companies to encourage gender balance?

The investigation of diversity initiatives has shown that the majority of Fintech companies in this study did not have any diversity programmes in place. Only one participant out of five confirmed that their organisation had a leadership programme available to women with leadership aspirations. The Fintech companies

without diversity programmes were either still in a start-up phase, and therefore too small to justify such programmes, or the reasons were unknown.

7.1.5 Sub-research Question 4:

Are there unique characteristics of Fintech that influence female advancement?

The flexible work environment, such as remote working and flexible hours, makes Fintech an attractive industry for women. Moreover, as Fintech is continuously evolving, there is room for development and career advancement. This is what makes the Fintech industry so appealing to women with leadership aspirations.

The findings have also revealed that Fintech's flexible working arrangements can act as a barrier to more senior leadership roles. Particularly, mothers in middle management with high work-family conflict are likely to choose flexibility over career advancement.

7.2 Conclusions of the Study

This research has shown that not all Fintech companies have a predominantly male leadership team and that there are opportunities for future female leaders. The findings clearly indicate that women need to be more confident and assertive in order to overcome barriers such as social undermining at organisational and societal level. Mentoring, sponsorship and networking are all highly beneficial, but women do need to actively reach out to experienced professionals, rather than waiting for opportunities to arise. The study has also found that, in comparison to the finance industry, Fintech offers greater flexibility. For example, advances in technology allow for flexible working hours and remote working. While Fintech is flexible and provides leadership opportunities for mothers, it is the conflict between work and family life that prevents these women from reaching top-level management. Although the path to leadership remains complex, women with leadership aspirations in Fintech should never lose sight of their leadership goals as opportunities do exist and barriers can be overcome.

7.3 Limitations of the Study

Several limitations need to be recognised in this study. First, the sample size was relatively small and does not represent all female leaders in Fintech. Second, the findings are based on personal narratives and therefore subject to potential bias. Third, the scope of the study was restricted to female leaders based in Ireland. Therefore, the findings may change when applied in a country with a different culture. Finally, this dissertation only captured a moment in time, which means that advancement and leadership development could not be tracked.

7.4 Recommendations for Future Research

Although the research was exploratory in nature, the findings still suggest that future research is warranted. First, this study used a small sample size. To yield more accurate results and test the validity of this research, a larger sample size would be recommended. Second, as the findings are based on narratives and therefore subject to bias, it is recommended that the research design be revised to involve quantitative measures. Third, future research on how social undermining in Fintech hinders women with leadership aspirations from achieving their leadership goals could generate new knowledge and make a useful contribution to research on gender and leadership.

References

Ames, D. (2009) 'Pushing up to a point: Assertiveness and effectiveness in leadership and interpersonal dynamics'. *Research in Organizational Behavior*, 29: pp. 111-133.

Antonakis, J., Schriesheim, C., Donovan, J., Gopalakrishna-Pillai, K., Pellegrini, E. and Rossomme, J. (2004). 'Methods for studying leadership'. in Antonakis, J. and Cianciolo, A. (eds.) *The Nature of Leadership*. Thousand Oakes, CA: Sage Publications.

Athanasopoulou, A., Cowan, A., Smets, M. and Morris, T. (2018) 'In interviews, female CEOs say they don't expect much support – at home or at work'. *Harvard Business Review,* June issue.

Atieno, P. (2009) 'An analysis of the strengths and limitation of qualitative and quantitative research paradigms'. Problems of Education in the 21st Century, 13: pp. 13-18.

Abouzahr, K., Garcia, J., Krentz, M., Tan, M., and Taplett, F. (2017) *How millennial men can help break the glass ceiling* [Online] Available at: https://www.bcg.com/publications/2017/people-organization-behavior-culture-how-millennial-men-can-help-break-glass-ceiling.aspx [Accessed 25 June 2018].

Auwera, Vander P., Maule, S. and Duhaime, C. (2015) *Power women in fintech index* [Online] Available at: https://innotribe.com/wp-content/uploads/2015/06/The-PowerWomen-in-Fintech-Index-Bridging-the-Gender-Gap.pdf [Accessed 10 May 2018].

Bakan, D. (1966) *The duality of human existence: An essay on psychology and* religion. Oxford: Rand McNally.

Bass, B. and Avolio, B. (1994) *Improving organizational effectiveness through transformational leadership*. Thousand Oaks, CA: Sage Publications.

Bettinger, A. (1972) 'Fintech: a series of 40 time shared models used at manufacturers Hanover trust company'. *Interfaces*, 2(62): pp. 62-63.

Bierema, L. (2016) 'Women's leadership: troubling notions of the "ideal" (male) leader'. *Advances in Developing Human Resources*, 18(2): pp. 119–136.

Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology'. *Qualitative Research in Psychology*, 3(2): pp. 77-101.

Bryman, A. (2004) *Social research methods*. 2nd ed. New York: Oxford University Press.

Bryman, A. and Bell, E. (2011) *Business research methods.* 3rd ed. New York: Oxford University Press.

Burke, R. and Vinnicombe, S. (2006) 'Supporting women's career advancement'. *Women in Management Review*. 21(1): pp. 7-9.

Burrell, G. and Morgan, G. (1979) *Sociological paradigms and organizational analysis*. Aldershot: Ashgate Publishing Limited.

Catalyst (2018*) Women CEOs on the S&P 500 – January List 2018* [Online] Available at: https://www.catalyst.org/knowledge/women-ceos-sp-500 [Accessed 2 August 2018].

Casciaro, T., Gino, F. and Kouchaki, M. (2016) 'Learn to love networking'. *Harvard Business Review*, May issue.

Creswell, J. (2009) *Research design: Qualitative, quantitative, and mixed methods approaches.* 3rd ed. Los Angeles: Sage Publications.

DHR International (2016*) Global fintech companies fall behind in race for top talent on the board - just 8% of directors are women* [Online] Available at: https://www.dhrinternational.com/about/news-media/global-fintech-companies-fall-behind-race-top-talent-board-just-8-directors-are-women [Accessed 10 May 2018].

Diamond, M. (2002) 'Sex and gender are different: sexual identity and gender identity are different'. *Clinical Child Psychology and Psychiatry*, 7(3): 320-334.

Doody, O. and Doody, C. (2015) 'Conducting a pilot study: case study of a novice researcher'. *British Journal of Nursing,* 24(21): pp. 1074-1078.

Dorfleitner, G., Hornuf, L., Schmitt, M. and Weber M. (2017) *Introduction: fintech in Germany.* 1st ed. Cham: Springer International Publishing AG.

Duffy, M., Ganster, D, and Pagon, M. (2002) 'Social undermining in the workplace'. *Academy of Management Journal*, 45: pp. 331–352.

Eagly, A.H. and Carli, L. (2007) 'Women and the labyrinth of leadership'. *Harvard Business Review*, September issue.

Eagly, A.H. and Heilman, M. (2016) 'Gender and leadership: introduction to the special issue'. *The Leadership Quarterly*, 3(27): pp. 349-353.

Eagly, A.H. and Karau, S.J. (2002) 'Role Congruity Theory of Prejudice Toward Female Leaders'. *Psychological Review*, 109(3): pp. 573–598.

EY (2017) *UK Fintech Census 2017* [Online] Available at: https://www.ey.com/Publication/vwLUAssets/EY-UK-Fintech-Census-2017/$FILE/EY-UK-Fintech-Census-2017.pdf [Accessed 11 May 2018].

Ezzedeen, S. and Ritchey, K. (2009) 'Career advancement and family balance strategies of executive women'. *Gender in Management*, 24(6): pp. 388-411.

Fletcher, J. (2004) 'The paradox of post heroic leadership: an essay on gender, power, and transformational change'. *The Leadership Quarterly,* 15(5): pp. 647-661.

Folta, S., Seguin, R., Ackerman, J. and Nelson, M. (2012) 'A qualitative study of leadership characteristics among women who catalyse positive community change'. *BMC Public Health,* 383: pp. 1-12.

Glaser, B. and Strauss, A. (1967) *The discovery of grounded theory: strategies for qualitative research. Chicago*: Aldine Publishing Company.

Golafshani, N. (2003) 'Understanding reliability and validity in qualitative research'*. The Qualitative Report*, 8(4): pp. 597-607.

Greef, W. (2015) 'Organizational diversity: making the case for contextual interpretivism'. *Equality, Diversity and Inclusion: An International Journal*, 34(6): pp. 496 – 509.

Gregory, A. and Milner, S. (2008) 'Editorial: work-life balance: a matter of choice?'. *Gender Work and Organization*, 16(1): pp. 1-13.

Guba, E. G., and Lincoln, Y. S. (1994) 'Competing paradigms in qualitative research'. in Denzin N.K. and Lincoln Y. S. (ed.) *Handbook of qualitative research*. London: Sage Publications.

Pereira-Heath, T. and Tynan, C. (2010) 'Crafting a research proposal'. *The Marketing Review*, 10(2): pp. 147-168.

Heilman, M. (2012) 'Gender stereotypes and workplace bias'. *Research in Organizational* Behavior, 32: pp. 113–135.

Holloway, I. (1997) *Basic concepts for qualitative research*. Oxford: Blackwell Science.

Hox, J. and Boeije, H. (2005) 'Data collection, primary versus secondary'. In Kempf-Leonard, K. (ed.) Encyclopedia of Social Measurement. San Diego, CA: Academic Press, pp. 593-599.

Hughes, C. and Sheerin, C. (2016) 'Reflections on the Relationship Between Mentoring, Female Development and Career Progression: Investment Management Versus Human Resource Management'. *International Journal of HRD Practice, Policy and Research*, (1)2: pp. 41-54.

Hymowitz, C. and Schellhardt, T. (1986) 'The glass-ceiling: why women can't seem to break the invisible barrier that blocks them from top jobs'. *The Wall Street Journal*, March issue.

Ibarra, H., Ely, R. and Kolb, D. (2013) 'Women rising, unseen barriers'. *Harvard Business Review*, September issue.

Jaekel, A. and St-Onge, E. (2016) ') Why women aren't making it to the top of financial services firms'. *Harvard Business Review*, October issue.

Johnson, W. and Smith, D. (2018) 'Mentoring women is not about trying to "rescue" them'. *Harvard Business Review*, March issue.

Khan, O. and Fazili, A. (2016) 'Work life balance: a conceptual review'. Journal of Strategic Human Resource Management, 5(2): pp. 20-25.

Kiaye, R. and Singh, A. (2013) 'The glass ceiling: a perspective of women working in Durban'. *Gender in Management*, 28(1): pp. 28-42.

Kirkwood, J. (2009) 'Is a lack of self-confidence hindering women entrepreneurs?'. *International Journal of Gender and Entrepreneurship, 1*(2): pp. 118-133.

Knollenberg, W. and McGehee, N. (2016) 'Lesson Learned in the Use of Mixed Methods to Gain Multiple Perspective in Tourism Leadership Research', *2016 TTRA International Conference on Advancing Tourism Research Globally*. Vail, Colorado, 14-16 June 2016, pp. 1-6.

Kvochko, E. (2016) *Why There Are Still Few Women Leaders in Tech* [Online] Available at: https://www.forbes.com/sites/elenakvochko/2016/01/04/women-executives-in-tech/#3e2ee01155e7 [Accessed 8 May 2018].

Lenka, U., Gupta, M. and Sahoo, D. (2016) 'Research and development teams as a perennial source of competitive advantage in the innovation adoption process'. *Global Business Review*, 17(3): pp. 700-711.

Leung, L. (2015) 'Validity, reliability, and generalizability in qualitative research'. J Fam Med Prim Care, 4(3): pp. 324-338.

Lincoln, Y.S., and Guba, E.G. (1985) *Naturalistic Inquiry*. Newbury Park, CA: Sage Publications.

Lyness, K. and Judiesch, M. (2014) 'Gender egalitarianism and work-life balance for managers: multisource perspectives in 36 countries'. *Applied Psychology: An International Review*, 63(1): pp. 96-129.

Maddock, S. and Parkin, D. (1993) 'Gender cultures: women's choices and strategies at work'. *Women in Management Review*, 2(2): pp. 3-9.

Metso, M. and Le Feuvre, N. (2006) *Quantitative Methods for Analysing Gender, Ethnicity and Migration.* Report. Toulouse: Université de Toulouse-Le Mirail [Online] Available at: https://www.york.ac.uk/res/researchintegration/Integrative_Research_Methods/Metso%20an d%20Le%20Feuvre%20Quantitative%20Methods%20April%202007.pdf [Accessed 26 May 2018].

National College of Ireland (2013) *Ethical guidelines and procedures for research involving human participants*. Unpublished Guidelines. Dublin: National College of Ireland.

Noonan, L., Marriage, M. and Jenkins, P. (2017*) Equal pay and opportunities for women in finance: why the hold-up?* [Online] Available at: https://www.ft.com/content/198abd62-1471-11e7-80f4-13e067d5072c [Accessed 23 May 2018].

Official Journal of the European Union (2016) G*eneral Data Protection Regulation* [Online] Available at: https://eur-lex.europa.eu/oj/direct-access.html [Accessed 16 June 2018].

Omar, O. and Ogenyi, V. (2004) 'A qualitative evaluation of women as managers in the Nigerian Civil Service'. *International Journal of Public Sector Management*, 17(4): pp. 360-373.

Padgett, D. (2017) *Qualitative research methods in social work research.* 3rd ed. New York: Sage Publications.

Paustian-Underdahl, S., Walker, L. and Woehr, D. (2014) 'Gender and Perceptions of Leadership Effectiveness: A Meta-Analysis of Contextual Moderators'. *Journal of Applied Psychology*, 99(6): pp. 1129 –1145.

Powell, G. and Butterfield, D. (2015) 'The role of androgyny in leader prototypes over four decades'. *Journal of Management*, 41(6): pp. 1745–1773.

Pratch, L. and Jacobowitz, J. (1996) 'Gender, motivation, and coping in the evaluation of leadership effectiveness'. *Consulting Psychology Journal: Practice and Research,* 48(4): pp. 203-220.

Quinlan, C., Zikmund, W., Babin, B., Carr, J. and Griffin, M. (2015) *Business research methods*. 1st ed. Andover: South-Western Cengage Learning.

Reh, S., Tröster, C. and Van Quaquebeke, N. (2018) 'Keeping (future) rivals down: Temporal social comparison predicts coworker social undermining via future status threat and envy'. Journal of Applied Psychology, 103(4): pp. 399-415.

Reiter, B. (2013) *The epistemology and methodology of exploratory social science research: crossing popper with Marcuse*. South Florida: Government and International Affairs Faculty Publications.

Rhee, K. and Sigler, T. (2015) 'Untangling the relationship between gender and leadership'. *Gender in Management*, 30(2): pp. 109-134.

Rhodes, M., Brickman, D. and Gelman, A. (2008) 'Sample diversity and premise typicality in inductive reasoning: Evidence for developmental change'. *Cognition*, 108: pp. 543–556.
Saadin, I., Ramli, K., Johari, H. and Harin, N. (2016) 'Women and barriers for upward career advancement'. *Procedia Economics and Finance*, 35: pp. 574-581.

Sadler, G., Lee, H., Lim, R. and Fullerton, J. (2010) 'Recruitment of hard-to-reach population subgroups via adaptations of the snowball sampling strategy'. *Nurse Health Science,* 12: pp. 369–374.

Saunders, M., Lewis, P. and Thornhill, P. (2016) *Research methods for business students.* 7th ed. Edinburgh Gate: Pearson.

Scarborough, W. (2018) 'What the data says about women in management between 1980 and 2010'. *Harvard Business Review*, February issue.

Schueffel, P. (2016) 'Taming the beast: a scientific definition on fintech'. Journal of Innovation Management, 4(4): pp. 1-24.

Silva, A. (2016) 'What is leadership'. Journal of Business Studies Quarterly. 8(1): pp. 1-5.

Smith, J. and Firth, J. (2011) 'Qualitative data analysis: application of the framework approach'. *Nurse Researcher*, 18(2): pp. 52-62.

Smith, P., Crittenden, N. and Caputi, P. (2012) 'Measuring women's beliefs about glass ceilings: development of the career pathways survey'. *Gender in Management*, 27 (2): pp. 68-80.

Snaebjornsson, I. and Edvardsson, I. (2013) 'Gender, nationality, and leadership style: a literature review'. *International Journal of Business and Management,* 8(1): pp. 89-103.

Soklaridis,S., Kuper, A., Whitehead, C., Ferguson, G., Taylor, V. and Zahn, C. (2017) 'Gender bias in hospital leadership: a qualitative study on the experiences of women CEOs'. *Journal of Health Organization and Management*, 31(2): pp. 253-268.

Souba, W. (2011) 'Perspective: a new model of leadership performance in health care'. *Academic Medicine*, 86: pp. 1241-1252.

Stebbins, R. (2001) *Exploratory research in the social sciences*. Thousand Oaks: Sage Publications.

Steele, C. and Aronson, J. (1995) 'Stereotype threat and the intellectual test-performance of African-Americans'. *Journal of Personality and Social Psychology*, 69(5): pp. 797-811.

Stentz, J., Clark, V. and Matkin, G. (2012) 'Applying mixed methods to leadership research: a review of current practices'. The Leadership Quarterly, 23(6): pp. 1173-1183.

Strauss, A. and Corbin, J. (1994) 'Grounded theory methodology: an overview'. in Denzin N.K. and Lincoln Y. S. (ed.) *Handbook of qualitative research*. London: Sage Publications.
Langley, P. and Leyshon, A. (2017) 'Capitalizing on the crowd: the monetary and financial ecologies of crowdfunding'. *Environment and Planning A*, 49(5): pp. 1019-1039.

Tansey, O. (2007) 'Process Tracing and Elite Interviewing: A Case for Non-probability Sampling'. *Political Science and Politics,* 40(4): pp. 1-23.

Teijlingen van, E., Rennie, A., Hundley, V. and Graham, W. (2001) 'The importance of conducting and reporting pilot studies: the example of the Scottish Births Survey'. *Journal of Advanced Nursing,* 34: pp. 289-295.

Tsusaka, M. (2018) *Without proper gender diversity, companies will fail* [Online] Available at: https://www.weforum.org/agenda/2018/01/gender-diversity-dollars-invest-where-it-matters-most/ [Accessed 6 May 2018].

Von Hippel, C., Sekaquaptewa, D. And McFarlane, M. (2015) 'Stereotype threat among women in finance: negative effects on identity, workplace well-being, and recruiting'. *Psychology of Women Quarterly*, 39(3): pp. 405-414.

Workplace Bullying Institute (2007) *Workplace bullying survey 2007* [Online] Available at: https://www.workplacebullying.org/wbiresearch/wbi-2007/ [Accessed 16 June 2018].

World Economic Forum (2017) *The key to closing the gender gap? Putting more women in charge* [Online] Available at: https://www.weforum.org/agenda/2017/11/women-leaders-key-to-workplace-equality/ [Accessed 14 May 2018].

World Health Organisation (2002) *Gender, equity and human rights* [Online] Available at: http://www.who.int/gender-equity-rights/understanding/gender-definition/en/ [Accessed 4 May 2018].

Zavolokina, L., Dolata, M. and Schwabe, G. (2016) 'What's in a name?', *2016 37th international conference on information systems*. Dublin, Ireland, 11-14 December 2016, pp. 1-19.

Participant:	I've always worked in male dominated environments. Yeah. I spent years in Finance. Okay, in my earlier roles they were small offices, were mainly male dominated. I suppose when I qualified I spent 10 company. After that in technology and Fintech.
Researcher:	So did you face any barriers along the way and what were the key you?
Participant:	I'd say my main barrier, and I'm going to be very honest here, was myself. I know I wouldn't have put myself forward as much as prol male colleagues would have and I would've always erred on the sid I can't do that rather than, of course I can do it. I push myself forw I was my main barrier. I wouldn't say anybody else was. I think I w: in my role and with my first Fintech company that I worked with 1! My boss who was my friend, but he was very open and honest and me off as such. And I learned a huge amount from him in terms of guess, you know, you always reach people who go, you know, our it's, I don't think it ever impeded me. My biggest impediment was
Researcher:	Thank you. You mentioned that you had a role model, so at the tin
Researcher:	Actually that's my next question, so what is your view on the role (sponsors and role models for career progression in Fintech?
Participant:	They're huge. I think that's such a role, particularly for women bec women in general don't push themselves forward and I think havir

Coding Density | Changing Culture | Finance background | Confidence | Mentors | Role Mode

PARTICIPANT INFORMATION SHEET

Topic of Research: Women's Career Advancement to Leadership Roles in Fintech.

You are being invited to take part in a research study. Before you decide if you would like to participate, it is important to understand why the research is being carried out and what it will involve. Please take time to read the following information carefully and ask questions if anything you read is not clear or if you would like more information.

What is the purpose of the research?

We are conducting research to identify the factors that influence the advancement of women to leadership roles in Fintech.

Who will conduct research?

Data will be collected by Tammy Mc Nabola, an MSc student, under the supervision of Dr Corina Sheerin, School of Business at the National College of Ireland.

What happens if I take part in this study?

If you agree to participate, the researcher will then ask you to sign a consent form. After that you will be asked to take part in an interview which should last between 15 – 30 minutes. You can refuse to answer any questions which you feel uncomfortable with and stop at any time.

What will happen to the information I provide?

All the data obtained will be anonymised and confidential to the research study. In accordance with the Freedom of Information Act, you are entitled to access the information you have provided at any time.

Who should I contact for further information?

If you have any further questions about the research study, please do not hesitate to contact:

CONSENT TO PARTICIPATE IN RESEARCH STUDY

- I ……………………………………………………………. voluntarily agree to participate in this research study.

- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.

- I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.

- I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.

- I understand that participation involves taking part in an interview which should last between 15 and 30 minutes and I agree to my interview being audio-recorded.

- I understand that all information I provide for this study will be treated confidentially.

- I understand that in any report on the results of this research my identity will remain anonymous.

- I understand that disguised extracts from my interview may be quoted in a dissertation.

- I understand that if I inform the researcher that myself or someone else is at risk of harm they may have to report this to the relevant authorities - they will discuss this with me first but may be required to report with or without my permission.

- I understand that a transcript of my interview in which all identifying information has been removed will be retained for two years after the researcher's degree has been conferred.

- I understand that under freedom of information legalisation I am entitled to access the information I have provided at any time while it is in storage.