



EXPLORING THE CHALLENGES TO ACHIEVING GENDER DIVERSITY IN SWEDISH IT FIRMS

Perspectives of Employers and Employees - A
Qualitative Study

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Supervisor:	Vedran Omanović
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Abstract

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Purpose: The purpose of this study is to analyse the main challenges HR and managers face when it comes to recruiting, attracting, and retaining women in the Swedish IT industry. It aims to identify the specific barriers that stand in the way of gender diversity, from recruitment strategies to workplace culture. This analysis will explore and address the complex barriers faced by women in the technology industry and improve understanding of the factors that influence gender diversity in the workplace.

Theory: This study uses Bandura's Social Cognitive Theory (SCT) to explore how HR practises in the IT sector contribute to gender inequality through observed behaviours. In addition, Lent et al.'s Social Cognitive Career Theory (SCCT) is used to examine the impact of personal beliefs and outcome expectations on women's career decisions in technology.

Method: The study is conducted using a qualitative research design in which data was collected on the basis of 17 semi-structured interviews with HR, recruiters, managers, and female employees in the ABC Company.

Result: The results of this study show that despite efforts to improve gender diversity, there are still significant gaps between corporate strategies and the actual experiences of women in the Swedish IT sector. Organisations face recruitment

and hiring challenges, including biased job descriptions and difficulties in attracting female talent, compounded by structural barriers that overshadow long-term diversity goals. Female employees report a lack of role models, gender stereotypes and insufficient support, indicating a workplace with unequal opportunities and subtle biases. However, the study also identifies positive strategies, such as increased mentoring and work-life balance policies, that show ways to close these gaps and promote a more inclusive and equitable environment.

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Chapter 1. Introduction

Sweden is noted for its commitment to equality and anti-discrimination, enacting laws and policies that promote equal opportunities for all its residents, including immigrants and minorities (Omanović, 2009). According to the Global Gender Gap Index 2023, Sweden ranks 5th worldwide, having closed 81.5% of its gender gap, highlighting its strong commitment to advancing gender equality across sectors such as education, economic opportunities, political empowerment, and health and survival (World Economic Forum, 2023). Although the Swedish population maintains a relatively balanced gender ratio, with a total population of 10,551,707, of which 5,312,519 are men and 5,239,188 are women (Statistikmyndighet, 2023), the country also has a high female labour force participation rate, with 67.25% of women in employment compared to 71.15% of men (Statistikmyndighet, 2024), the tech industry shows a significant gender disparity, indicating that gender parity in tech remains an area needing substantial improvement. Tech Sverige data reveals that women constitute only about 30% of the workforce in the Swedish technology sector. In Sweden, although more women are enrolled in higher education overall, the technology sector remains predominantly male, with over 60,000 male students compared to 37,000 female students in the academic year 2022-2023 (Statista, 2023).

In the 21st century, the pervasive influence of technology continues to grow, yet a substantial gender gap persists within the Information Technology (IT) sector, marked by a notable underrepresentation of women. This disparity reflects male dominance in the technology industry, despite rapid technological advancements (Tokbaeva & Achtenhage, 2023). Research into this issue has revealed a range of contributing factors, including early life influences such as lack of motivation, gender-based differential treatment, and a shortage of information and inspiration related to technology (Christie et al., 2017). The presence of role models in domestic, educational, and collegiate environments plays a vital role in shaping career choices and fostering interest in technology (Nauta & Kokaly, 2001).

Although Sweden has made significant strides toward gender equality and reduced discrimination (Haaramo, 2017), challenges remain within its technology sector, particularly in filling senior technological roles with female professionals (Wiberg, 2017). Current research has shed light on discriminatory practices that obstruct women's career advancement in the sector. This thesis delves into how HR and hiring managers in Swedish IT companies tackle the recruitment and retention challenges of promoting gender diversity, examining the barriers that women face in the Swedish labour market. The insights derived from this study will contribute to developing targeted strategies to address the persistent underrepresentation of women in the IT industry.

1.1. Motivation for the study

During my master's program, I completed an internship in the People & Culture partner team in the IT department of a multinational company in Sweden. This assignment involved a specific task related to Swedish legislation on the working environment. For this purpose, I conducted interviews with managers at different levels of the IT department, focusing on the challenges in the work environment.

A recurring theme that came up in these interviews was the difficulty in recruiting women for IT positions. Managers expressed a strong desire to diversify their teams but had considerable difficulty attracting female candidates, particularly for technical positions. This was exacerbated by the fact that the number of female applicants from talent or graduate programs was strikingly low, which managers attributed to the low number of women in technical and engineering programs at universities. It was also a particular challenge to find highly qualified women for management positions in the industry.

These conversations highlighted the barriers to hiring women in the technology industry, which prompted me to delve deeper into this topic. Out of a desire to understand and address these challenges, I started this research project to investigate the underrepresentation of women in the Swedish IT sector. This study may also explore to identify effective strategies for the recruitment and retention of women in the technology sector and thus contribute to the development of a more inclusive and diverse industry.

1.2. Problem formulation

Ahuja (2002) have documented that women face significant barriers to entry and advancement in technology fields, primarily due to discrimination and bias. The Swedish technology industry is known for its innovation, but still faces a significant paradox: the persistent underrepresentation of women. This qualitative study aims to explore the complex dynamics of systemic barriers and personal experiences that perpetuate this gender inequality. The focus is on understanding the impact of HR practices and the experiences of women in the technology sector.

Previous research, including Wentling and Thomas (2009), highlights the challenges and barriers arising from discrimination in the workplace that hinder women from entering and progressing in the IT sector. However, there is a notable gap in the comprehensive understanding of the role of HR and hiring managers in Swedish IT companies. This study attempts to fill this gap by examining the strategies HR and hiring managers use to recruit and hire women and promote gender diversity in the workplace.

Exploring dual challenges

Organizational dynamics and the role of the HR department: This study will take a critical look at the challenges HR professionals and managers face in hiring, attracting, and retaining women in the tech sector. It aims to highlight the organizational and structural challenges — from recruitment strategies to workplace culture — that hinder gender diversity.

The female perspective in the tech sector: In parallel, the experiences of women in the Swedish tech industry will be examined, with a focus on how organizational practices impact their professional development and self-efficacy. This approach promises to provide a holistic understanding of the barriers women face in the tech industry.

Bridging the gap: The symbiotic relationship between HR strategies and women's experiences

A critical aspect of this research is how HR strategies and women's experiences in the workplace intersect. The study hypothesizes that the effectiveness of diversity and inclusion policies directly reflects women's opportunities for advancement in the tech industry. Analysing this relationship will shed light on what improvements need to be made to current practices to truly promote gender diversity.

1.3. Research Objectives and Questions

The study aims to uncover the real challenges HR and hiring managers face in recruiting women and promoting gender diversity in the Swedish IT industry. Integrating the results of this research into the existing knowledge on gender diversity in the IT industry will support the development of innovative policies and strategies to promote gender equality in Swedish IT companies.

Research questions:

The study is guided by two main research questions:

1. What specific challenges do recruiters, HR professionals and managers face in their efforts to attract, hire, and retain women in the IT sector?
2. From the perspective of women working in the IT sector in the Swedish labour market, what experiences, barriers and factors contribute to their underrepresentation in IT companies?

1.4. Disposition

The structure of this study is divided into 7 chapters, which are described below:

Chapter 1: This initial chapter offers an introductory overview, setting the stage with the background, motivation, objectives, and research questions of the study.

Chapter 2: - This chapter explores the context underrepresentation of women in IT.

Chapter 3: This chapter mainly explores the previous research which are aligned with the research questions.

Chapter 4: This chapter outlines the theories on which the study is based.

Chapter 5: This chapter describes the methodological approach of the study and discusses the associated ethical considerations.

Chapter 6: This chapter include the results from analysis and then discussing them.

Chapter 7: This chapter concludes the study.

Chapter 2. Context overview

2.1. Diversity and Its Importance

Gender diversity recognises a range of gender identities beyond traditional categories and enhances organisational and societal inclusivity by valuing unique perspectives and expanding the talent pool (Nanda, 2014).

Historically, the focus on diversity began in the 1960s with the US gender equality initiatives that laid the foundation for modern diversity and inclusion efforts (Omanović, 2009). Today, gender diversity encompasses a variety of identities such as non-binary and transgender people and emphasises their equal inclusion in society. This diversity enhances organisational effectiveness, innovation, social justice, and cohesion.

Companies with a high level of gender diversity are often more financially successful, suggesting that diversity promotes competitiveness and growth (Hunt et al., 2018). Nevertheless, there is a gender imbalance in the IT sector, even in progressive countries such as Sweden, where women are underrepresented in the technology industry. To change this, comprehensive strategies are needed that include policy reform, organisational change, and societal change to promote inclusion and ensure equal opportunities for all genders.

2.2. Gender diversity in the Swedish context

The Swedish labour market is particularly characterized by historical, institutional, and societal dynamics, which are summarized in the "Swedish model". This model, based on the 1938 Fundamental Treaty, established the basic principles for industrial relations in Sweden and emphasized minimal state intervention and the autonomy of the social partners (Elvander, 2002). The Swedish model is characterized by strong trade unions and collective bargaining and also includes a comprehensive social safety net, that reflects the country's commitment to social dialog and consensus (Peterson et al., 2012). This approach has enabled Sweden to adapt effectively to globalization and economic change while maintaining its economic competitiveness and social cohesion.

Almost two-thirds of women are represented in the Swedish labour market, illustrating the progress made in gender equality. Nevertheless, significant gaps remain, particularly in the male-dominated technology sectors (Tokbaeva & Achtenhage, 2023). Robust policies and high female participation in both the workforce and academia underscore Sweden's commitment to gender diversity, but

challenges remain in achieving full gender equality, particularly in science, technology, engineering, and mathematics (STEM) fields.

The economic impact of gender diversity is also important in Sweden. Research has shown that workplaces with high gender diversity tend to be more innovative, productive, and competitive (Hunt et al., 2018). Furthermore, Sweden's leadership in gender equality not only boosts the country's economic performance, but also serves as a model that demonstrates the positive correlation between a diverse workforce and robust economic outcomes. This underscores the critical role of gender diversity in strengthening organizational effectiveness and economic sustainability in the Swedish context.

2.3. The situation of women in IT in Sweden

The Swedish IT industry, which is known for its efforts towards gender equality, still struggles with significant gender gaps. Research shows that while women make up around 30% of the industry's workforce, they only account for 19% of software engineers, indicating a pronounced gender gap in more technical roles (Dawson, 2023; Tech Sverige, n.d.;). This imbalance is exacerbated by the fact that men hold the majority of IT roles and leadership positions. Longitudinal studies such as Almeida's (2018) show that the gender gap persists over the years, particularly in technical education and career paths, with the proportion of women opting for technical careers being significantly lower than that of men.

Studies of gendered organizational structures in the Swedish IT industry shows that these structures limit women's access to technical positions and affect their overall representation in the industry (Davies and Mathieu, 2005). Although the sector offers high wages and autonomy, structural barriers continue to hinder gender equality.

The "State of Women in Tech" 2023 study illustrates both progress and persistent barriers, noting that while many women and non-binary individuals feel valued and see opportunities to make an important contribution, they also experience and recognize a significant gender imbalance and a lack of appropriate recognition for their contributions (Women In Tech Sweden, 2023). Positive trends in employee retention rates from 2018 to 2023 indicate a gradual improvement in workplace conditions for women in tech. One of the representatives of NGO (who help, support, and encourage women in the technology field in their career development) points out that promoting diversity plays a crucial role in increasing the profitability and creativity of the IT industry and emphasizes the continued need for inclusive practices to promote a diverse IT landscape.

Despite these findings and the high overall employment rate of women in Sweden, the tech industry continues to lag behind in female representation as mentioned above. This underlines the need to further increase efforts to achieve gender parity in the Swedish IT sector.

2.4. Underrepresentation of women in technology and challenges

The underrepresentation of women in IT is a complex problem that is influenced by social norms, educational gaps, and the work environment. Research has consistently highlighted gender bias, discrimination, and stereotypes as key barriers to women's representation in IT (Williams & Dempsey, 2014). These systemic challenges highlight the need for a comprehensive strategy to promote a more inclusive IT sector.

Christie et al. (2017) discusses additional barriers such as low self-esteem and lack of support during secondary education that hinder women's entry into IT and related fields. They emphasize the importance of mentors and female role models to improve the recruitment, retention, and success of women in STEM fields. Their findings are a plea for policies that support educational transitions to promote gender diversity in IT.

Avolio et al. (2020) identify critical factors such as gender bias, limited educational opportunities and deep-rooted societal stereotypes that not only discourage women from pursuing IT careers, but also hinder their advancement in the field. They recommend creating an inclusive work environment, introducing mentoring programs and tackling unconscious bias as important measures to increase the number of women in IT.

Trinkenreich et al. (2022) examine the socio-cultural challenges, work-life balance issues and biases affecting women in IT. Their study cites sexism, lack of recognition and barriers to career progression as the main reasons why women leave the IT sector. These findings show that targeted initiatives are needed to tackle the multiple causes of women's underrepresentation in the IT sector and underline the importance of strategic action to improve conditions and opportunities for women in the industry.

2.5. Scope and Significance of the Study

This study not only documents the state of gender diversity in the Swedish IT sector, but also provides practical insights into how gender equality practices in Swedish IT companies can be improved. The results of the study will benefit a wide range of stakeholders, including women in the technology industry, HR, and managers.

The study addresses the experiences and challenges of women in the technology industry and provides insight for shaping careers, creating a supportive work environment, and capitalizing on leadership opportunities. Hiring practices are expected to shift towards more inclusivity and attract a diverse range of talent.

HR and managers will gain valuable information on how to design job postings and hiring processes to attract a broader candidate pool and enrich the industry with diverse skills and perspectives. The study also provides managers with insights on how to manage diverse teams more effectively to increase productivity, innovation, and efficiency.

Ultimately, this study deepens the discussion on gender diversity in technology, influences policy, practice and culture in the Swedish IT sector and makes an important contribution to gender equality in technology.

Chapter 3. Previous Research

3.1. Social Construction of IT as a Male Domain

The construction of IT as a male-dominated domain is a multi-layered phenomenon shaped by a complex interplay of social norms, cultural expectations, organizational practices, and individual experiences. This literature review addresses the complex dimensions of this phenomenon and examines the historical marginalization of women in IT, the pervasive influence of stereotypes and cultural norms, organizational practices that reinforce gender biases, and the profound impact on women's participation in the IT sector.

The exclusion of women from equal participation in IT has deep historical roots. Scholars such as Tokbaeva & Achtenhagen (2023) emphasize how the historical construction of IT with a male identity in mind has marginalized women, limiting their access to opportunities, and hindering their advancement in the field. Ahuja (2002) further underscores this historical marginalization by pointing out the gender disparities in employment in the computer industry, where men are predominantly employed in analytical and managerial positions, while women are often relegated to routine and technical work. Shuttleworth (1992) sheds light on this inequality by highlighting that women are often confined to certain roles within the industry, reinforcing the perception of IT as a male domain.

Stereotypes that portray women as unsuitable for technical roles perpetuate barriers to their entry and advancement in IT (Tokbaeva & Achtenhagen, 2023). Added to this are cultural narratives and societal expectations that portray IT as a male-dominated domain and discourage women from

pursuing a career in this field (Zhu, 2019). Furthermore, Ahuja (1995) highlights how software design and educational institutions perpetuate gender biases by portraying technology as inherently male-oriented and triggering performance anxiety in girls. Such stereotypes within the industry cause women to struggle with low self-esteem and Impostor Syndrome (Hyrnsalmi, 2019), further hindering their participation and success in the IT industry.

Organizational practices in the IT industry contribute to the perpetuation of gender stereotypes and the marginalization of women. Davies & Mathieu (2005) show how hiring and promotion processes favour characteristics associated with masculinity, reinforcing the image of the industry as male dominated. In addition, Wiberg (2017) discusses how homosociality and a preference for male camaraderie in IT reinforces male dominance and limits women's access to important networks and opportunities. Holth et al. (2017) also emphasizes the role of stereotypical role expectations and gender segregation in perpetuating the social construction of IT as a male domain.

Cultural and social expectations also play an important role in the perception of IT as a male-dominated field. Armstrong & Riemenschneider (2014) cite cultural and social expectations as important barriers that contribute to the social construction of IT as a male domain. Women are confronted with social expectations that push them into traditionally female roles and keep them away from areas such as IT that are perceived as masculine. Furthermore, Ahuja (1995) states that social norms and cultural values keep girls away from technology and science from an early age and reinforce the perception of these fields as male domains.

The educational environment and early socialization play a crucial role in shaping IT as a male domain. Armstrong & Riemenschneider (2014) emphasize that girls are less encouraged to engage with technology and computing from an early age, further exacerbating the gender gap in IT careers. Davies & Mathieu (2005) also discuss how educational practices reinforce gender norms by portraying IT as a domain more suited to men.

The lack of visible female role models in STEM fields reinforces the perception of IT as a male domain. Christie et al. (2017) suggests that greater visibility of successful women in STEM subjects can help to challenge and change the gendered perception of these fields. Similarly, Armstrong & Riemenschneider (2014) point out that the lack of female role models in IT contributes to the social construction of the field as male dominated. The work culture and practices in the software industry are influenced by broader societal biases that view IT as a male domain. Trinkenreich et al. (2022) discuss how cultural, structural sexism shapes the experiences and career prospects of women in the software industry and contributes to the social construction of IT as a male domain. Women in the software industry face invisible structural barriers stemming from the deep-rooted stereotype of IT

as a male domain. Trinkenreich et al. (2022) argue that these barriers hinder women's access to leadership positions and contribute to their underrepresentation.

Societal stereotypes and gender roles reinforce the perception of STEM subjects, including IT, as a male domain. Christie et al. (2017) suggest that these stereotypes discourage women from pursuing STEM careers because technological skills and interest are associated with masculinity. The lack of visible female role models in IT reinforces the perception of the field as male dominated. Mozahem (2022) points out that experiencing success stories of women in the IT industry can positively influence women's self-efficacy and interest in this field and thus counteract the male-dominated image. Gender-specific prejudices in technology development further cement the social construction of IT as a male domain. Disregarding women's needs and perspectives in the design and development of technology not only marginalizes women, but also perpetuates stereotypes and makes it difficult for women to see themselves as part of the IT field (Huyer & Nuñez, 2022).

Despite progress towards gender equality in various sectors, the IT industry maintains a culture that excludes women. Despite superficial equality, entrenched organizational and cultural practices maintain a status quo that favours male employees (Davies & Mathieu, 2005). This archetype of the ideal employee, who is inherently masculine and favours traits typically associated with men, undermines roles that are perceived as feminine in the IT sector (Wiberg, 2017). As a result, women not only encounter external barriers, but also internalized self-doubt and imposter syndrome, which further hinders their engagement and advancement in the field (Hyrynsalmi, 2019).

3.2. Organizational and Structural Barriers

3.2.1. Gendered Organizational Practices and Culture

The landscape of IT professions is heavily dominated by men, which is a significant barrier for women who want to make a career and advance in this field (Ahuja, 2002). This prevailing culture perpetuates gendered organizational practices, such as the imposition of "gender contracts" that restrict women's career paths within organizations (Tokbaeva & Achtenhagen, 2023). As a result, female IT professionals often encounter barriers such as the "glass ceiling," implicit bias and professional devaluation, requiring a resilient approach to overcome these gendered professional challenges (Tokbaeva & Achtenhagen, 2023). Furthermore, women are often relegated to less valued technical fields, reinforcing gender stereotypes, and limiting their opportunities for advancement (Tokbaeva & Achtenhagen, 2023). This gender segregation is reinforced by the prevalent male perception of programming, which discourages women from participating and emphasizes the urgent need for cultural change to promote gender diversity (Zhu, 2019). In this

predominantly male environment, homosociality further entrenches male dominance by limiting women's access to networks, opportunities and promotions and perpetuating gender segregation (Wiberg, 2017). The lack of access to informal networks in IT professions exacerbates these challenges and hinders women's career advancement and opportunities (Ahuja, 2002). Furthermore, widespread gender blindness within organizations hinders the identification and elimination of gender inequalities, perpetuating gender segregation and inequality in the IT sector (Wiberg, 2017). Amidst these challenges, however, there are also holistic arguments. For example, the presence of female role models and mentors in companies can reduce some of these barriers by providing guidance and support to aspiring women in the IT sector (Davies & Mathieu, 2005). In addition, initiatives to promote work-life balance and an inclusive workplace culture can create an environment that is conducive to gender diversity and the advancement of women in IT roles (Holth et al., 2017).

3.2.2.Social and Structural Barriers

Women's participation in STEM subjects faces a number of challenges, starting with misconceptions about the nature and requirements of STEM careers. Christie et al. (2017) highlights these misconceptions as a key barrier, with participants expressing a lack of understanding of potential career paths in STEM subjects. This lack of clarity is compounded by widespread self-doubt, particularly around math and science ability, perpetuated by an education system focused on rankings and grades (Christie et al., 2017). Furthermore, societal perceptions exacerbate the problem, as STEM careers are often seen as incompatible with family life and male dominated. This perception discourages women from pursuing STEM careers as they prioritize work-life balance and perceive STEM as a male-dominated industry (Christie et al., 2017). The lack of visible female role models further exacerbates this problem, hindering women's ability to envision STEM careers and perpetuating gender stereotypes (Christie et al., 2017).

In addition to social and structural barriers, the digital gender gap also persists, limiting women's access to technology and digital employment. Huyer & Nuñez (2022) emphasize the importance of this gap, which is influenced by factors such as cost, education, and gender norms. Despite efforts to address these challenges, the "silicon wall" remains a barrier that hinders women's participation and leadership in technology and STEM fields (Huyer & Nuñez, 2022). Furthermore, inequality in the design and development processes means that women's participation in STEM subjects remains low globally. The phenomenon of the "leaky pipeline" exacerbates these challenges and highlights the urgent need for innovative approaches to promote women's engagement in technology sectors (Huyer & Nuñez, 2022). Despite these barriers, there are opportunities for women's empowerment

through technology. Digital technologies offer opportunities for women's access to information, education, and livelihoods, provided they are developed with gender equality in mind (Huyer & Nuñez, 2022).

3.2.3. Work-Life Balance and Family Responsibilities

The overlap between work and family is a major challenge for women in the IT sector. Ahuja (2002) emphasizes how social expectations and the struggle to balance work and family influence women's career choices and their long-term commitment to the profession. Furthermore, the availability dilemma identified by Holth et al. (2017) illustrates how women in the Swedish ICT sector opt out of roles that require high availability due to family commitments, which hinders their career development and expertise. Management uncertainty exacerbates these challenges. Despite formal gender equality policies, there is often a lack of support for work-life balance in business practice, which reinforces the gendered division of labour (Holth et al., 2017). Tokbaeva & Achtenhagen (2023) explore this issue further, noting how gender contracts within organizations limit career opportunities for female IT professionals and perpetuate existing gendered systems. Age discrimination adds another layer of complexity. Hyrynsalmi (2019) highlights that women entering the software industry mid-career are discriminated against both on the basis of their gender and age, compounding the challenges they face. Furthermore, Mozahem (2022) discusses the role of emotional arousal, e.g. fear of math, in women's career choices and points out that psychological barriers need to be addressed alongside structural ones.

3.2.4. Career Advancement and Structural Inequities

When it comes to gender equality in the IT sector, several structural injustices hinder women's career advancement and contribute to their underrepresentation. Gender inequality in the workplace remains a pressing issue, as evidenced by the significant imbalances, particularly in positions such as systems and IT architects (Zhu, 2019). This systemic problem in hiring and promotion underscores the need for comprehensive reforms. An important aspect contributing to this imbalance is the lack of female role models and mentors in the IT industry. Studies consistently point out that there are few comparable role models for aspiring women, which is detrimental to career advancement and retention rates (Ahuja, 2002). Without visible examples of successful women in leadership and technical positions, female aspirants have a limited idea of possible career paths, which exacerbates gender inequality in the industry (Davies & Mathieu, 2005). In addition, the deeply ingrained professional culture in IT companies is a major barrier to gender diversity. The pervasive male-dominated environment discourages women from working or advancing in the field, necessitating a profound change in corporate culture (Ahuja, 2002). This cultural barrier intersects

with institutional structures that do not adequately support women's career advancement. Existing organizational frameworks often lead to gender inequalities and require comprehensive structural reforms to promote inclusion (Ahuja, 2002). In addition to cultural and institutional challenges, gender biased assessment of skills further exacerbates inequalities in career advancement. Studies show that biased perceptions and judgments affect women's opportunities and self-assessment in the IT sector (Davies & Mathieu, 2005). This perpetuates the phenomenon of the glass ceiling, where invisible barriers hinder women's upward mobility and reinforce gender inequalities (Trinkenreich et al., 2022). Crucially, these barriers are not limited to visible structures, but also include invisible structural biases that are deeply rooted in societal norms. Structural sexism, reflected in the professional environment, significantly shapes the experiences and career trajectories of women in the software industry (Trinkenreich et al., 2022). Perceived pay inequality and inequality in career progression also point to systemic organizational problems and highlight the urgent need for reform (Trinkenreich et al., 2022). Given these challenges, it is clear that tackling gender inequality in the IT sector requires multi-faceted strategies. While initiatives targeting diversity in the workplace and mentorship programs are important, they need to be complemented by broader structural reforms. These reforms should aim to break down deep-rooted cultural biases, promote an inclusive corporate culture and tackle systemic inequalities that perpetuate gender inequality.

3.2.5.Organizational and Workplace Dynamics

Gender diversity in the IT sector is influenced by a complex interplay of social perception and organizational dynamics. The social construction of IT as a male-dominated domain perpetuates stereotypes and discourages women from participating (Trauth et al., 2004). This perspective, rooted in essentialism, suggests that inherent gender differences contribute to underrepresentation and argues for gender approaches that potentially deepen the divide within IT workplaces (Trauth et al., 2004). However, empirical evidence challenges these views and highlights the role of organizational culture in shaping gender dynamics. Women often experience isolation in their career development, indicating a lack of sustained support beyond the initial recruitment stages (Tokbaeva & Achtenhagen, 2023). Conversely, advancement to higher ranks mitigates perceptions of bias and discrimination, suggesting that structural reforms can change experiences of gender inequality (Tokbaeva & Achtenhagen, 2023). Furthermore, migrant women face additional challenges, such as higher unemployment rates and overrepresentation in low-paid positions, further exacerbating the struggle for gender diversity (Zhu, 2019). This highlights the need to consider intersectionality in diversity initiatives and recognize the particular barriers faced by marginalized groups. Furthermore, theoretical advances advocate a shift towards theories of individual difference that

recognize the influence of the sociocultural environment on gender identity and career development (Trauth et al., 2004). Such theories critique existing perspectives for their limited solutions and call for inclusive and adaptive approaches to organizational and structural reform (Trauth et al., 2004). This critical examination emphasizes the importance of removing systemic barriers and creating an environment that supports the diverse experiences and aspirations of women in the IT sector.

3.3. The Female Perspective in the Tech Sector

The persistent lack of gender diversity in the technology sector is a major challenge, as women remain significantly underrepresented in technical and managerial positions. This inequality not only inhibits innovation, but also perpetuates harmful gender stereotypes and hinders the sector's potential for growth and inclusion. To effectively address these complex challenges, it is important to recognize and understand the numerous obstacles women face in the tech industry, while exploring possible solutions from a distinctly female perspective.

The visibility and representation of women in various technical and leadership positions in the IT industry are crucial to changing perceptions and inspiring future generations. Tokbaeva & Achtenhagen's (2023) research emphasizes the critical importance of visible female representation in the tech industry to challenge entrenched gender stereotypes and motivate aspiring women in the field. As Trauth et al. (2004) emphasize, the inclusion of the female perspective in IT is critical to promoting a broader understanding and use of technology. This perspective recognizes that women bring unique insights and experiences to the sector and highlights the need to consider diverse viewpoints.

Gender differences in the adoption and sustained use of technology in the workplace underscore the importance of considering the female perspective in the development and implementation of technology strategies (Ahuja, 2002). Studies have consistently shown that gender bias and discrimination persist in the technology sector, significantly impacting women's career development and sense of belonging (Hyrynsalmi, 2019). These challenges are exacerbated by societal norms and expectations that discourage women from pursuing careers in technology (Davies & Mathieu, 2005).

Women in the technology sector also struggle with particular work-life balance challenges, influenced by the demanding nature of tech jobs and societal expectations of women's roles (Davies & Mathieu, 2005). Work-life balance concerns often lead to gendered career patterns, with women moving away from technical positions due to these challenges (Holth et al., 2017). In addition, internal competition, and lack of support from other women can exacerbate the difficulties women face in male-dominated fields (Wiberg, 2017).

The prevalence of gender stereotypes further discourages women from pursuing careers in STEM fields, perpetuating the underrepresentation of women in the technology sector (Christie et al., 2017). To address these systemic issues, women need to be empowered through supportive policies and an inclusive environment. Digital platforms have proven to be effective tools to empower women, enabling them to overcome the traditional barriers to entering the technology sector (Huyer & Nuñez, 2022). Furthermore, a more inclusive technology development process that incorporates the female perspective can facilitate the creation of equitable and effective technological solutions (Huyer & Nuñez, 2022). It is imperative that stakeholders in the sector work together in earnest to implement meaningful change and create a more inclusive environment that truly considers the perspective of women in technology.

3.4. Impact of HR Strategies and Workplace Culture

In the contemporary discourse on workforce dynamics, the impact of HR strategies and workplace culture on organizational success has received considerable scholarly attention. Particularly in the field of IT where gender inequalities persist, understanding the complex interplay between HR strategies and workplace culture is of paramount importance. This literature review addresses the multiple dimensions of HR strategies and workplace culture and examines their profound impact on diversity, career advancement, and organizational dynamics in the IT sector.

A critical way in which organizations can promote diversity and inclusion is by implementing HR strategies that actively support these values. Tokbaeva and Achtenhagen (2023) emphasize the central role of inclusive recruitment and retention strategies in creating a favourable environment for women in the technology sector. These strategies include targeted recruitment initiatives, comprehensive diversity training programs and the implementation of gender-sensitive policies. These initiatives not only attract diverse talent, but also promote an inclusive corporate culture that fosters collaboration, innovation, and employee satisfaction (Tokbaeva & Achtenhagen, 2023). There is also empirical evidence that companies with a diverse workforce outperform their competitors in terms of innovation and financial performance. A study by McKinsey & Company found that companies with a diverse workforce are 21% more likely to achieve above-average profitability than their less diverse counterparts (Hunt et al., 2018). This underlines the tangible benefits of inclusive HR strategies for the success and competitiveness of companies.

An intersectional approach to HR strategies recognizes and addresses the particular challenges faced by marginalized groups, such as female programmers from immigrant backgrounds, in the technology sector. Zhu (2019) emphasizes the need for such strategies to ensure the inclusion and advancement of migrant women programmers. Through language support, cultural sensitivity

training and mentorship programs, companies can create a welcoming and inclusive workplace culture that leverages the diverse perspectives these individuals bring to the IT sector (Zhu, 2019). Furthermore, research shows that diverse teams are better able to solve complex problems and foster innovation. A study published in the Harvard Business Review found that teams with members who have diverse backgrounds and experiences are up to 80% superior to homogeneous teams in terms of problem-solving ability (Hong & Page, 2004). This highlights the critical role of intersectional HR strategies in realizing the full potential of diverse talent pools and promoting innovation and competitiveness in organizations.

The impact of HR strategies and workplace culture goes beyond mere diversity initiatives and significantly shapes the career trajectory of employees, particularly women, in the IT sector. Trauth et al. (2004) emphasize the importance of recognizing the individual differences between women in the IT industry and adapting HR strategies accordingly. By addressing the underrepresentation of women and implementing personalized strategies for recruitment, retention and advancement, companies can reduce the barriers to career advancement for women in the IT industry (Trauth et al., 2004). In addition, organizational culture, which is closely intertwined with HR strategies, plays a critical role in promoting or hindering career advancement. Ahuja (2002) explains how corporate cultures that do not recognize, and support women's achievements and potential can hinder their career advancement and retention in the IT sector. One example of this is the glaring gender gap in leadership positions, which emphasizes the importance of changing corporate cultures to achieve gender diversity (Ahuja, 2002). Despite the progress that has been made in promoting diversity and inclusion, there are still some challenges in the tech industry that are exacerbated by the lack of supportive HR policies and organizational culture. Hyrynsalmi (2019) highlights the inadequacy of HR strategies in supporting women pursuing careers in tech, contributing to feelings of inadequacy and impostor syndrome. Likewise, prevailing HR practices and organizational cultures perpetuate gender biases and create barriers to career advancement and retention for women in the IT sector (Hyrynsalmi, 2019).

Gender-neutral HR policies exacerbate these challenges by perpetuating a workplace culture that excludes women and reinforces gender segregation. Wiberg (2017) highlights the detrimental effects of such policies on women's career progression and emphasizes the need for HR strategies that actively challenge gender stereotypes and promote inclusivity (Wiberg, 2017).

Chapter 4. Theoretical Framework

In this section, I present the theoretical framework of my qualitative study, which addresses the real-world challenges faced by recruiters, hiring managers, and executives in achieving gender balance

in the workplace and combating the underrepresentation of women, as well as the challenges faced by female employees in the technology industry and the factors that influence their career choices. My approach draws on several key theoretical perspectives, each of which contributes to a comprehensive understanding of the phenomenon.

4.1. Social Cognitive Theory (SCT)

Bandura's (1986) SCT provides a basic framework for analysing how HR practices and management decisions contribute to the perpetuation of gender inequality in IT organizations. According to SCT, people absorb knowledge from their environment through observation. This concept can be used to understand how decisions about recruitment, selection and career development in the industry are influenced by gender biases and assumptions.

In addressing the challenge of promoting gender diversity in the IT sector, the integration of Albert Bandura's SCT provides a comprehensive framework for understanding and addressing the interplay between personal, behavioural, and environmental factors (Bandura, 1986). SCT's emphasis on observational learning and the influence of role models provides valuable insights into how women in the IT industry can be supported by the visibility of successful female personalities within the industry to enhance their self-efficacy and motivation to pursue a career in this field.

The need for such a theoretical foundation is evident when considering that research highlights the significant gender imbalances in the IT industry, which not only present barriers to women's entry and advancement, but also affect their ability to build credibility and overcome unconscious bias (Ahuja, 2002; Trauth et al., 2004). This underscores the critical role of HR policies and management strategies in cultivating a corporate culture that actively promotes inclusion, leverages diverse perspectives, and breaks down unconscious biases.

To effectively address these challenges, HR policies and management practices need to be rethought and realigned to support the empowerment and advancement of women in IT. Strategies should include the introduction of structured evaluation criteria that objectively assess contributions and performance, ensure equal participation in decision-making processes, and promote a culture of recognition that values and acknowledges the unique contributions of female employees. These measures, aligned with the principles of the SCT, can go a long way in strengthening the self-efficacy of women in IT and promoting a more inclusive and equitable work environment.

Observational Learning (Modeling): The concept of observational learning, as outlined in SCT by Albert Bandura, provides a compelling perspective from which to analyse the dynamics of gender diversity in the IT sector. This theoretical perspective highlights how individuals learn and adopt

behaviours, skills, and attitudes by observing others, emphasizing the importance of role models, social cues, and mentoring. In analysing the application of observational learning to the field of HR and organizational practices, two critical subsections emerge: the impact on organizational culture and practices, and the influences on recruitment and hiring strategies.

HR Practices and Observational Learning: observational learning as a mechanism of SCT assumes that behaviours and norms observed and internalized by managers can significantly influence organizational culture, especially in IT and other male-dominated industries. This can either perpetuate an environment that is less conducive to women's participation and leadership or drive a shift towards greater gender diversity (Bandura, 1986). The representation of the organization's workforce and the way job postings are worded are critical to leveraging observational learning to attract a more diverse applicant pool, including women, for IT positions. This assertion is supported by Paersch (2018), who highlights the importance of employer branding for gender diversity, suggesting that clear strategies that value gender diversity can attract a wider talent pool and therefore promote inclusivity.

Furthermore, the persistence of gender bias in organizations can be observed through decision-making patterns that unconsciously favour male candidates or undervalue the contributions of women. These learned biases, deeply embedded in recruitment and promotion practices, unintentionally perpetuate gender inequalities. However, the visibility of diversity in an organization's promotional materials not only influences applicants' perceptions of inclusivity, but also attracts female applicants for IT positions (Avery et al., 2007). This illustrates how observational learning can be used to create an organizational culture that values and promotes gender diversity.

Organizational Culture and Observational Learning: observational learning underscores the influence of role models and workplace norms on individuals' career choices and trajectories. Despite efforts to eliminate discrimination, the Swedish labour market remains highly gendered, reflecting a hidden gender system that significantly influences women's career paths in the IT sector (Tokbaeva & Achtenhagen, 2023). This situation highlights the need to model inclusive behaviours within organizations in order to challenge and change entrenched norms.

Empirical evidence also highlights the crucial role of visible female role models in challenging prevailing gender stereotypes in male-dominated sectors such as IT. Studies such as Tokbaeva & Achtenhagen's (2023) support the idea that women in leadership positions can effectively reinforce female employees' belief in their career prospects, which is consistent with Bandura's SCT. This

highlights the importance of representation and visibility in promoting gender integration through observational learning.

Bandura (1977) describes four processes that play a role in observational learning: Attention, retention, reproduction, and motivation. This underlines the importance of role models and mentors not only in education, but also in companies. The visibility of positive behaviours and successful outcomes can inspire individuals to take similar actions (Bandura, 2001).

Self-Efficacy: In academic research on gender diversity in the IT sector, the concept of self-efficacy, essentially formulated by Bandura (1997), proves to be a cornerstone. Bandura (1997) explains, Self-efficacy beliefs determine how people think, behave and feel (p. 191) and emphasizes the profound influence these beliefs have on individual action and resilience in the face of challenges. This idea is particularly relevant when examining the obstacles and opportunities for women in the IT industry, where self-efficacy influences career paths and professional growth.

Bussey and Bandura (1999) have looked at the gendered nuances of self-efficacy and how social constructions and interactions influence beliefs about self-efficacy and consequently gender roles and aspirations. Bussey and Bandura (1999) argue that social practices perpetuate and reinforce gender differences through multiple influential mechanisms (p. 676). and emphasize the social foundations of self-efficacy and its role in gender identity formation.

Complementing this, Pajares (1996) looks at the role of self-efficacy in educational success and states that self-efficacy beliefs have a crucial influence on learners' motivation and academic engagement. Pajares explains: *"Individuals will only tackle tasks of which they have a certain expectation of success"* (Pajares, 1996, p. 544), thus emphasizing the influence of self-efficacy on educational pathways and outcomes.

The interaction between self-efficacy and gender diversity in IT becomes even clearer through the study of role models and mentorship. Ahuja (2002) point out that the lack of female role models in leadership and technical positions in IT can significantly affect women's self-efficacy and career advancement. Conversely, Stout et al. (2011) shows the positive influence of female role models on women's self-efficacy in STEM subjects and suggest that visible success stories can promote women's persistence in IT careers.

In addition, recruitment practices and corporate cultures that challenge stereotypes and emphasize inclusivity can strengthen women's self-efficacy, as Morgenroth et al., (2015) find. This aligns with the findings of Zeldin et al., (2008), who identify the threat of stereotypes and lack of encouragement

as barriers to women's participation in STEM subjects and suggest that strategic interventions can increase self-efficacy and thus promote gender diversity in IT.

Wiberg (2017) adds to the discourse by identifying the male-dominated work environment as a critical challenge to women's engagement in the IT sector, while Tokbaeva and Achtenhagen (2023) emphasize the effectiveness of targeted interventions such as mentorship programs to promote women's professional resilience and self-efficacy in such an environment.

4.2. Social Cognitive Career Theory (SCCT)

Lent et al. (1994) introduced SCCT, which extends my theoretical approach by providing insights into the experiences of women in the IT industry on their career path. Using SCCT, we can examine how women's career decisions in technology-related sectors are influenced by their expectations of their outcomes and their views of their own effectiveness. This contributes to a more nuanced understanding of the processes involved in career decisions.

SCCT is concerned with the processes by which individuals form career interests, make decisions, and achieve career success. Lent et al. (1994) introduced SCCT by extending Bandura's (1986) social cognitive theory to the area of career development. This theory emphasizes the interplay between personal self-efficacy beliefs, outcome expectations, and goal setting in influencing career progress.

Self-efficacy, a central tenet of SCCT, describes a person's belief that they are capable of performing the actions required to achieve certain outcomes (Bandura, 1986). These beliefs are formed through personal accomplishments, vicarious experiences, and social persuasion and influence the development of career interests and persistence (Lent et al., 1994). Outcome expectations, another important component, refer to the individual's beliefs about the consequences of certain behaviours, which are shaped by past experiences and perceived social norms (Lent et al., 1994).

Personal goals, as defined in the SCCT, guide individuals toward certain occupational behaviours and sustain their motivation over time (Lent et al., 1994). This aspect of SCCT illustrates how goal setting is intertwined with self-efficacy and outcome expectations, which facilitates career choice and performance.

Lent et al. (1994) highlights the dynamic interaction between these cognitive-personal factors and environmental influences, drawing on Bandura's concept of reciprocal determinism, which states that behaviour, personal factors, and environmental conditions are interrelated (Bandura, 1986).

SCCT provides a comprehensive framework for understanding the complexity of career development, and emphasizes the importance of self-efficacy, outcome expectations and goals, and their interaction with the broader social environment. This theory has made an important contribution to the fields of career counselling and educational psychology by providing insight into effective strategies for career counselling and intervention.

Organizational Dynamics and HR's Role in Gender Diversity: Linking organizational dynamics, Human Resource (HR) practices, and the empirical foundations of SCCT provides a comprehensive lens through which to examine and improve the persistence of women in the IT sector. Understanding the role of HR in promoting gender diversity and examining the empirical foundations of SCCT provide a nuanced way to address the systemic challenges faced by women in the IT industry.

Organizational dynamics have a significant influence on career development opportunities for women in the IT industry. As Lent et al. (1994) argue, environmental conditions, including organizational cultures and practices, play a critical role in shaping individuals' self-efficacy beliefs and outcome expectations, which are central to SCCT. HR departments therefore play a critical role in creating an environment that promotes gender diversity and inclusivity. This includes implementing policies and practices that have a direct impact on women's self-efficacy and persistence in IT careers. For example, Lent (2013) emphasize the importance of supportive organizational practices and mentoring opportunities that can improve the career development of women in IT.

Empirical studies underline the relevance of SCCT for understanding and supporting the career persistence of women in IT. Byars-Winston et al. (2010) highlight the positive correlation between self-efficacy, outcome expectations and interest in STEM subjects, demonstrating the applicability of SCCT. This relationship suggests that interventions aimed at increasing self-efficacy and aligning outcome expectations with personal and professional goals may promote greater participation and persistence of women in IT. In addition, Steele (1997) and Aronson et al. (1999) discuss the impact of stereotypes on self-efficacy and provide empirical evidence of how societal perceptions can discourage women from pursuing and persisting in STEM careers, including IT.

By integrating this empirical evidence into organizational practice, HR can develop targeted strategies to counteract the negative effects of stereotypes and foster a culture that supports women's career advancement in IT. Examples of such strategies include training that addresses and mitigates the threat of stereotypes, establishing mentorship programs with successful female role models in

IT, and promoting success stories of women in IT within the organization to inspire and motivate others.

Career Commitment and Stereotype Threat: Stereotypes, especially gender-based ones, are a significant barrier to women's careers in IT. The negative impact of stereotype threat on self-efficacy (Steele, 1997; Aronson et al., 1999) is well documented and demonstrates how societal perceptions can undermine women's confidence and persistence in STEM fields. The impact of stereotype threat on women's self-efficacy is profound. When people are constantly exposed to stereotype threat, they can become alienated from their career field, leading to attrition (Steele, 1997; Aronson et al., 1999; Woodcock et al., 2012). It is important for recruiters and managers to understand how confidence in overcoming educational barriers and workplace challenges can mitigate the influence of stereotype threat. The ability to persevere through personal career goals despite challenges is a sign of a high level of professional commitment. This perseverance is crucial for women working in male-dominated fields such as IT and engineering (Jung & Kim, 2020). The SCCT provides a framework for understanding and addressing these stereotypes by focusing on personal and environmental factors that can mitigate the threat of stereotypes and support women's resilience and perseverance in IT careers.

The Intersection of Self-Efficacy, Outcome Expectations, and Women's Career Development in IT through SCCT: Integrating social cognitive career theory (SCCT) into the analysis of women's career development in IT provides a nuanced understanding of the challenges and opportunities they face. At the heart of SCCT are the concepts of self-efficacy and outcome expectations, which have a significant influence on career interests, decisions, and performance. As Lent et al. (1994) explain, self-efficacy involves "*people's beliefs about their abilities to organize and execute courses of action required to achieve specific outcomes*" (p. 83). This belief system is critical not only to the decisions individuals make, but also to their perseverance in the face of adversity and to their overall career success.

Bandura (1986) suggests that self-efficacy develops through experiences of mastery, vicarious experiences, social persuasion, and physiological states, all of which contribute to a person's belief in their ability to succeed. In the context of women pursuing a career in IT — a field traditionally dominated by men — these self-efficacy beliefs can be significantly influenced by the presentation (or lack thereof) of female role models, societal stereotypes, and the feedback they receive from peers and superiors. For example, the lack of visible female role models in leadership positions in the IT sector can limit vicarious experiences that increase self-efficacy, as Lent et al. (1994) found.

Outcome expectations, i.e., the individual's beliefs about the consequences of certain behaviours, further interact with self-efficacy and influence career trajectories. According to Lent et al. (1994), outcome expectations may include personal satisfaction, social recognition or financial rewards related to career choice. Women in the IT industry may face particular outcome expectations, as societal norms and stereotypes may suggest a discrepancy between women and the technical field, affecting their motivation to pursue or remain in such a career.

Using the SCCT to understand the career development of women in the IT sector is thus highly relevant and in line with the aim of examining gender diversity in the sector. Empirical studies support the usefulness of this theoretical framework. For example, Byars-Winston et al. (2010) found significant correlations between self-efficacy, outcome expectations and interest in STEM subjects among underrepresented groups. They argue that strengthening self-efficacy and aligning outcome expectations with personal and professional goals can encourage greater participation and persistence.

In addition, the challenges highlighted in the IT sector, such as stereotype threat, can have a direct impact on self-efficacy. Steele (1997) describes stereotype threat as situations in which individuals are at risk of confirming negative stereotypes about their social group, which can have a negative impact on performance and interest. Aronson et al. (1999) illustrate how stereotype threat can undermine women's self-efficacy in STEM subjects, leading to disengagement and dropout.

In analysing gender diversity in the IT industry, SCCT therefore provides a framework for understanding how interventions can be designed to strengthen women's self-efficacy and positively influence outcome expectations. For example, mentorship programs that provide mastery experiences, successful female role models (vicarious experiences), and an environment that challenges negative stereotypes can strengthen the overall self-efficacy of women in the IT industry. When these strategies are aligned with positive outcome expectations — such as advancement opportunities and equal work environments — they can motivate women to pursue and persevere in IT careers.

Chapter 5. Methodology

5.1. Research Design

Using the grounded theory of Glaser and Strauss (1967), I explore the challenges, experiences and perspectives of HR, recruiters, managers, and female IT employees to identify themes and patterns that illuminate gender inequalities in the IT sector. This approach helps to generate hypotheses

directly from the interview data and incorporate the SCT and SCCT to comprehensively analyse gender bias.

Interviews with HR, recruiters, managers, and female IT employees in Sweden are used to analyse their views on gender bias and its impact on career development and workplace dynamics. Using theoretical considerations, the analysis seeks to understand the underrepresentation of women in the technology industry and identify barriers to gender parity.

This qualitative study uses a phenomenological design to explore gender diversity in the Swedish IT industry in depth. This method, highlighted by Creswell and Creswell (2023), captures the lived experiences of individuals in diverse and inclusive IT environments and provides insights into the barriers to gender diversity.

Data analysis in a strategically selected Swedish IT organisation known for its diversity initiatives interprets language and visual material to uncover deeper meanings and insights about gender diversity. Semi-structured and open-ended interview questions are used in the study to facilitate this process recommended by Flick (2014).

Number	Alias	Role	Date	Place	Age	Sex	Number of pages in transcription
1	HRBP1	HRBP	08/03/2024	Online	51	Female	8
2	HRBP2	HRBP	11/03/2024	Online	51	Female	7
3	HRBP3	HRBP	12/03/2024	Online	42	Male	4
4	Manager 1	Hiring Manager	15/03/2024	Online	47	Female	8
5	Manager 2	Hiring Manager	15/03/2024	Online	49	Female	11
6	Manager 3	Hiring Manager	19/03/2024	Online	37	Male	7
7	Recruiter 1	Talent Acquisition	08/03/2024	Online	49	Male	8
8	Recruiter 2	Talent Acquisition	13/03/2024	Online	51	Female	9
9	Recruiter 3	Employer Branding & Communication	19/03/2024	Online	50	Female	9
10	Employee 1	Software Engineer Associate	06/03/2024	Online	26	Female	5
11	Employee 2	Software Engineer Associate	06/04/2024	Online	28	Female	5
12	Employee 3	Software Engineer	11/03/2024	Online	28	Female	5
13	Employee 4	Professional Solution Engineer	08/03/2024	Online	25	Female	4
14	Employee 5	XR Developer	07/03/2024	Online	35	Female	4
15	Employee 6	Professional Solution Engineer	14/03/2024	Online	55	Female	8
16	Employee 7	Senior Solution Architect	15/03/2024	Online	59	Female	8
17	Employee 8	Senior Solution Engineer	20/03/2024	Face to face	44	Female	7
TOTAL:							117

Table 1: Interviewee List

5.2. Sampling Strategy

The sampling strategy of this study explores the qualitative aspects of the underrepresentation of women in technology and aims to collect detailed narratives from women in technical roles. This is complemented by interviews with key HR, recruiters, and managers who are helping to create an enabling environment for female talent in the tech sector. The findings of a Swedish non-governmental organisation working to promote women in the technology sector are also included.

The interviews were recorded to maintain engagement without the distraction of notetaking. 17 people participated in the interviews, including 3 HR business partners, 3 managers, 3 recruiters and 8 female employees. In initial pilot interviews, the interview guide was refined to adequately address gender diversity, organisational practises, and career development, and to integrate theories such as SCT and SCCT.

The study uses abductive reasoning to analyse the complex interplay between individual experiences and organisational strategies to improve understanding of gender diversity and career development in the technology sector. This approach allows for a dynamic integration of theoretical insights with empirical data, which is critical for exploring the nuanced realities of participants.

5.3. Data Collection Methods

This qualitative study explores the underrepresentation of women in the Swedish IT industry and utilises both primary and secondary data sources to develop a comprehensive understanding of the challenges and experiences of women in IT.

The study collects primary data through in-depth interviews with HR, recruiters, managers, and female IT professionals, focusing on their experiences and views on gender diversity initiatives. By partnering with a leading Swedish IT company, the study gains access to a relevant and willing group of participants forming an opportunistic sample. It is therefore an opportunistic demographic sample (Etikan et al., 2016).

Secondary data collection includes a review of existing literature, company websites, online resources, and employment statistics on women in the IT industry. This approach broadens the context of the individual experiences documented in the interviews.

5.4. Data Analysis Plan

Thematic analysis (TA) is used in this qualitative study of the experiences of women in the Swedish IT sector and the perceptions of HR and managers' perceptions of gender diversity. TA is valued for its systematic approach to breaking down complex qualitative data into recognisable themes and patterns, as highlighted by Clarke & Braun (2017) and Saunders et al. (2023).

The process begins with in-depth interviews, followed by a thorough examination of the data through an iterative coding process. Initial reviews familiarise researchers with the data, which is then categorised into codes that capture key findings. This foundational step allows for the identification and analysis of themes that encompass critical experiences and issues related to gender diversity in the IT sector. The rigour of the methodology ensures a systematic and reproducible analysis.

The three-stage approach to TA— described by Saunders et al. (2023) - reading, coding, and thematising - enables detailed analysis of the data and distils complex narratives into coherent themes that reflect collective experiences and challenges such as gender bias, workplace culture dynamics and career barriers for women in the technology industry.

The thematic analysis concludes with a synthesis of the themes, providing a comprehensive overview of the challenges and actionable insights to improve gender diversity and inclusion in the IT industry. In addition, abductive reasoning is used to link the empirical findings to theoretical frameworks to enhance the study's contribution to the discourse on gender diversity and career development in the technology industry. This flexibility is essential to manage the complexity of qualitative research and to promote sound, innovative exploration of the phenomena studied.

5.5. Ethical Considerations

Ethical considerations are crucial in this qualitative study on the underrepresentation of women in the Swedish IT industry. Informed consent was carefully obtained from all participants to ensure that they were aware of their participation and consented voluntarily. Anonymity and confidentiality were strictly maintained so that participants could share their experiences openly and without fear of reprisals. They were also informed of their right to withdraw from the study at any time without consequences. This emphasises adherence to ethical standards and respect for individual autonomy (Artal & Rubinfeld, 2017). This approach ensures trust and transparency throughout the research process (Smith & Noble, 2014).

5.6. Limitations, Advantages, Disadvantages and Risks

The phenomenological approach used in this study aims to explore the nuanced experiences of gender diversity in the Swedish IT sector and provides a detailed insight into participants' perspectives (Creswell & Creswell, 2023). Although this method provides rich data, it also brings challenges, such as researcher bias, whose subjective views could influence the data collection and analysis and potentially skew the results (Smith & Noble, 2014). Careful handling of bias is necessary to maintain the integrity of the results. Furthermore, the depth-oriented nature of phenomenology limits the scope and generalisability of the study, as results from such detailed contexts may not be generally applicable. Recognising these limitations is crucial for accurately positioning the study's contributions to the discussion on gender diversity in the IT sector.

Chapter 6. Findings and Discussions

The results of this study are based on the detailed analysis of 17 transcribed interviews. Each transcription was subjected to qualitative thematic coding, following the methodology described by Bryman (2016). Through this analytical approach, several key themes emerged which are discussed below.

Research Aim	Description	Theme
Research Question 1	What specific challenges do recruiters, HR professionals and managers face in their efforts to attract, hire and retain women in the IT sector?	• Gender Disparity in Application Rates • Recruitment Challenges • Perceived Hiring Challenges • Retention and Career Development Challenges • Workplace Culture and Work-Life Balance in IT
Research Question 2	From the perspective of women working in the IT sector in the Swedish labour market, what experiences, barriers and factors contribute to their underrepresentation in IT companies?	• Women's Perception of the IT Sector • Socio-Cultural Influences and Personal Aspirations • Structural Barriers and Workplace Dynamics • Professional Development and Support Systems • Work-Life Balance and Family Responsibilities • Diversity Initiatives and Organizational Culture

Table 2: Themes

6.1. Organizational dynamics and the role of the HR department

6.1.1. Gender Disparity in Application Rates

In this section, I analyse the low proportion of female applicants for technical positions at ABC Company and the associated challenges for the HR department and managers. A key finding is the particularly low number of female applicants for positions such as software architects. The majority

of respondents (6 out of 9) cited a significant gender gap in applications as one of the biggest recruitment challenges, with each respondent elaborating on the complexity of these issues. For example, one HRBP pointed to a general trend towards gender inequality in job applications:

"It depends on the type of job, but for some positions, such as certain developer roles, we see only men applying. For instance, we might receive applications from maybe five women compared to fifty men. This disparity can certainly pose a problem." (HRBP2).

This statement emphasises the quantitative challenge and the significant imbalance in the applicant pool. Another HRBP agreed and pointed out the difficulty of recruiting enough women to achieve a diverse applicant pool:

"Yeah, I think it's sometimes hard because they're not so many to choose from. And so, if we have the number of applicants, it's normally not that many women who are applying. So, it's hard just in that initial state even to get enough people to apply for the jobs, or enough women to apply for the jobs" (HRBP3).

The complexity deepens with the types of roles women are applying for in the IT sector. One manager pointed out a particular trend and explained:

"There are not so many applicants. They start with the applicants, the women, they are in fewer numbers... And then another challenge is that they are concentrated in some roles like they come as analysts, they come as UX designers. It's really rare that they come as developers, but there are a few and extremely rare that they come if the position is for an architect" (Manager1).

This points not only to a general lack of female applicants, but also to their specific absence in highly technical fields. Cultural and societal perceptions also play an important role in shaping these trends, as one manager explained in relation to cultural barriers:

"It was more of that that I tried to do, but the challenge is that you don't get a lot of women applying because they cannot see themselves. There are not many women that they can go to. OK, it is OK to be part of this class. You're considered to be a nerd. Maybe it's not even fashionable to be a woman and in tech, unless you are a total nerd and you see yourself there, it's not easy for them to just go and get into the tech swims as such" (Manager2).

This reflects entrenched social stereotypes that prevent women from seeing themselves in technical roles, as they are perceived as unapproachable or undesirable. This realisation prompts us to explore

the systemic issues and career aspirations of young female employees interested in roles such as software architect, which attract fewer female applicants. One young female software engineer shared her ambitions and remarked:

"Yeah, maybe the solution architecture... ...I haven't imagined myself maybe into a management role so yeah, I don't have a definite answer right now but the solution architecture for sure" (Employee3).

This suggests that young women are interested in progressing into more complex and technically demanding IT roles, although they often lack sufficient opportunities or support. These findings illustrate how personal beliefs, social norms and systemic barriers influence women's IT career paths. Lent et al (1994) emphasise the crucial interaction between individual cognitive factors and environmental influences and offer deeper insights into this dynamic. The underrepresentation of women in technical careers is not only due to individual choices but is significantly shaped by wider cultural and structural forces.

From the perspective of employers, there is a notable perception of how gender influences the interpretation of job advertisements and the subsequent application process. This observation is central to understanding broader recruitment dynamics and aligns with theoretical concepts from SCT, such as observational learning, self-efficacy, and outcome expectations. Employers note that there are significant differences in the way male and female applicants approach job requirements. One HRBP emphasized:

"We have lots of male candidates that do not fulfil the requirements, but they go for it even though they don't have all of the needed qualifications. And that's not the way that women really read postings. Because then they say, "OK, yeah, I don't fulfil the requirements...they don't go for the job" (HRBP1).

This indicates that women often interpret professional qualifications more cautiously and literally, probably due to social norms and learned behaviours that favour meticulousness over risk-taking. This is related to the concept of self-efficacy, i.e. the belief in one's own ability to succeed, which influences how applicants view their qualifications compared to job ads. HR managers are finding that men are applying even if they only fulfil part of the job requirements, as one experienced HRBP describes:

"Men and women often respond differently to job advertisements. Men are likely to apply for a job even if they don't meet all the requirements listed in the ad. For instance, even if a man doesn't have all the skills for an HR manager position, he might still apply, ...

But women might hesitate to apply if they feel they don't meet all the listed qualifications. During salary negotiations, women tend to be less aggressive, often accepting offers closer to what is initially proposed without countering for higher pay.” (HRBP2).

In contrast, the same HR professional noted that women's reactions are markedly different:

"If a woman would look at the same ad... Ohh damn it, it's five things here. I don't know. That's why I can't do this. I am not even applying for it. They might hesitate to apply if they feel they don't meet all the listed qualifications. During salary negotiations, women tend to be less aggressive, often accepting offers closer to what is initially proposed without countering for higher pay.” (HRBP2).

This reflects women's lower self-efficacy and may discourage them from applying unless they are almost fully qualified. Outcome expectations — the perceived consequences of actions — also have a significant impact on this gender dynamic. Women may fear negative consequences such as rejection or criticism if they apply for jobs for which they do not fulfil all the qualifications and are therefore reluctant to apply. The observation of one recruiter confirms this trend:

"A man will reply if he's got three out of 10 criteria... A woman, it's between 8 or 9 out of 10. So, it's really, I mean a massive gap" (Recruiter3).

This suggests that the expected outcomes for women are significantly influenced by their perceived suitability for the role. Employers recognize these patterns and acknowledge that they may need to adapt their recruitment strategies to encourage more women to apply. One manager mentioned that:

"I kind of have a much wider range of people to choose from, because women tend to read every line and be very sure that, OK, I can fulfil this job" (Manager2).

This understanding could lead to more inclusive job descriptions and recruitment practices that are better aligned with how women interpret the job criteria, potentially increasing the diversity of applicant pools.

6.1.2. Recruitment Challenges

Attraction and Awareness

When examining the challenges of recruiting, hiring, and retaining women in the IT sector, the issue of attractiveness and awareness is at the forefront. 8 out of 9 respondents admit that there are significant difficulties in this area, particularly when it comes to changing the image of the sector to make it more attractive to female professionals.

Perceived Challenges to Attract Women in the IT Sector:

The challenge of attracting women to technical roles in the IT sector remains a major problem, as 6 out of 9 respondents emphasized. These challenges include strategic initiatives, recruitment practices and the nuanced adaptation of job advertisements aimed at increasing the proportion of women in a traditionally male-dominated field.

In the IT sector, the challenge of attracting women to technical roles is shaped by recruitment strategies, workplace culture, and societal norms. These challenges are framed within SCT, emphasizing observational learning and self-efficacy (Bandura, 1997), and SCCT, highlighting the importance of outcome expectations in shaping women's career choices in IT (Lent et al., 1994; Byars-Winston et al., 2010). Organisation have recognized that they need to set clear, ambitious goals to increase the percentage of women. As one HR manager put it:

"We have also set a target to increase the ratio of women, which is quite an aggressive target as well. I think we're about 25% women today, maybe a bit higher and the target is within before 2030. We should be like 35%" (Recruiter1).

This goal not only underlines the commitment to gender diversity, but also serves as a measure of the organization's progress and influences the motivational climate through clear expectations and goals. Despite these initiatives, HR leaders continue to face obstacles when it comes to achieving these diversity goals. According to one HRBP, achieving these diversity goals:

"We have more men, but we still have more than a third of women in those jobs. And so, I think we have difficulties attracting and retaining women in some particular jobs" (HRBP1).

This difficulty is partly due to the availability of female candidates in the pipeline, as another recruiter noted:

"What can we do to increase the ratio of female engineers or IT technicians? But somehow, we cannot seem to fix it still and maybe because there aren't enough female engineers out there in the market" (Recruiter1).

This reflects a broader challenge for the industry, where educational and societal factors are limiting the pool of available candidates. Recruitment practises themselves are under constant review to ensure that they are attractive to female applicants. Recruiters have a responsibility to review their recruitment processes to identify areas where improvements can be made:

"I think we can do more, and I asked my colleague to look into what could be some potential D&I targets for the recruitment process" (Recruiter2).

"We have faced problems attracting females to these positions... Can we do something differently when we, for instance, post our ads and so on" (Recruiter1).

This ongoing assessment aims to optimize recruitment practices to better align with diversity goals. These strategic adjustments are designed to attract more women to the industry and support their professional growth. I can argue that showcasing successful female role models and emphasizing supportive work conditions can boost women's self-efficacy and attract them to IT roles, aligning with Bandura's principles of observational learning (Bandura, 1986) and outcome expectations (Lent et al., 1994). This acknowledgment has led to significant changes in how job roles are framed, aiming to highlight aspects that might be more appealing to women.

"They try to make the phrases more attractive to women and also push for more soft values in the workplace, not only the hard facts" (HRBP1).

I argue here, the job description can modify perceptions and behaviours, thus enhancing the appeal of IT roles to women by presenting them as inclusive and supportive. In addition, efforts go beyond internal adjustments to include active external engagement.

"We also do things that we work with associations, external associations, with work with schools" (Recruiter3).

These collaborations are important to inspire future generations and provide them with a concrete pathway into the IT industry to foster a pipeline of qualified female candidates. I contend that this strategic integration is not just about filling roles, but about building a sustainable, diverse workforce that can drive innovation and growth. My argument here is to improve the visibility of female success stories through employer branding. IT companies can use observational learning to attract a diverse applicant pool by aligning with SCT and emphasizing the role of role models according to SCCT in shaping inclusive career paths.

Challenges in Communication and Perception:

7 out of 9 respondents in the study emphasized the complexity of effective communication within the IT sector to attract women. This challenge is closely related to concepts from SCT and SCCT, such as observational learning, personal, behavioural, and environmental factors, which emphasize the influence of role models and social cues on career choice. One manager pointed out the widespread stereotypes that could prevent women from entering the IT field:

"How the IT industry is portrayed, perhaps because if you believe that you will be sitting in the basement and tapping away on a keyboard all day long, then maybe that's not as attractive a picture to a woman as it is to a man" (Manager3).

And similar view can be noted from one of the HRBP:

"If we just talk about developers, I don't find so many women that like those jobs as much as men can be very boring and they can see them, you know, sitting in they can lock themselves in their room for 12 hours and drink cola and it can do and develop. But it's. I just don't think as many women tend to like that kind of job that some of those job, at least so I that's one of the reasons" (HRBP2)

Addressing these misconceptions through targeted communication that aligns with SCT can significantly change perceptions, as people often model their behaviour and expectations based on observations of role models in a particular environment. A recruiter discussed the difficulty of ensuring that messages reach the intended audience due to information overload:

"There are numerous of these initiatives. Maybe there are too many, so it's hard for everyday Joe or Jane just to know where can I turn what? What are they? What options are there for me?" (Recruiter1).

One recruiter's reflections on the cultural focus of their business highlight the importance of diversity in their brand strategy:

"It's a part of our culture in terms of our diversity and inclusiveness perspective, right? But it also shows that we are not investing all our time at work, we have other parts of our lives that are equally important and that we are able to do that which I think a lot of females it's very important to us" (Recruiter2).

This highlights how promoting work-life balance can appeal to potential employees, particularly women who may place value on this aspect due to societal and personal expectations. I argue that by highlighting a commitment to diversity and work-life balance, employer branding can attract more female candidates. Utilizing observational learning (Bandura, 1977), showcasing real-life success stories demonstrates an inclusive environment, challenging stereotypes and encouraging women to enter traditionally male-dominated fields (Steele, 1997; Aronson et al., 1999). One manager emphasized the importance of these educational partnerships and how they impact higher education:

"It is also to work with the universities and maybe at the school level, which ABC IT Company is doing as well to encourage girls to take up tech, that it is not something which is not mean, but it can be something that they actively work with" (Manager2).

I argue that collaborations aimed at fostering inclusion not only enhance recruitment but also allow young women to envision themselves in STEM roles, influenced by role models and supportive educational settings (Bandura, 1986). These efforts emphasize the necessity of early intervention and continuous support, highlighting their potential to shift gender dynamics in STEM and significantly impact career choices and diversity.

Biases and barriers

The recruitment challenges in the IT sector, particularly biases and barriers for women, reflect the significant impact of social conditioning and highlight the need for early interventions (Bandura, 1986). These issues underscore how environmental factors and ingrained behaviours influence career choices and perpetuate gender roles from a young age. One manager pointed out that these biases start early and are embedded in social norms:

"If you dress a boy like a girl and put in childcare, the toys that the boy is given, and the person that boy was dressed as a girl is given, is different from me when he's dressed as a boy. So, we are conditioning ourselves from the start without our knowledge to be good or not so good in some area" (Manager2).

The need for early intervention is reflected in initiatives aimed at integrating awareness into the education sector.

"We are connected with the schools here as well to encourage girls to get into tech" (Manager2).

Recruiters also recognize the importance of combating stereotypes through educational collaboration:

"It's at the very beginning when girls are very little...some of our colleagues are visiting primary schools and they're trying to show them that tech is easy and fun" (Recruiter3).

A recruiter provided personal insights by reflecting on their own experiences with their children and the biases they encounter, highlighting the ubiquity of these challenges:

"I have three daughters...and I was trying to influence them positively about really considering the technical subjects, but it's like they've known since they were seven that now this is not for me" (Recruiter2).

To effectively combat these biases, it is imperative that organizations adopt inclusive recruitment practices and actively work towards gender-neutral job postings.

"We've been using a technical tool which screens every individual job posting text...called gender decoder, which analyses text and gives proposals" (Recruiter1).

Such tools are helpful to ensure that job descriptions are gender inclusive and reflect an organization's commitment to diversity and inclusion. I believe that strategies to combat bias in technology should start in early childhood in order to create equal career opportunities. Emphasizing female role models in technology, as Bandura (1986) suggests, and addressing societal norms that discourage girls from technical careers, as Ahuja (1995) notes, are critical. These efforts aim to break down stereotypes and promote technology as an attractive career path for women by providing positive, encouraging narratives from an early age.

6.1.3.Perceived Hiring Challenges

In the context of hiring challenges in the IT sector, the issue of recruitment effort and commitment to diversity is central to understanding how organizations navigate the complex landscape of gender diversity. This research draws on the SCT and SCCT, which highlight the influence of personal, behavioural, and environmental factors on recruitment practices.

Recruitment Effort and Diversity Commitment

A common challenge cited by HR professionals is the pressure to fill vacancies quickly, which often clashes with diversity objectives. For example, one HR manager highlighted the urgency of recruitment:

"Sometimes we just face this. Someone resigned with a very, very niche key competence. We just need to find replacements quickly and of course we would love it to be a female. But if there is none, we just need to do a quick fix" (Recruiter1).

This statement illustrates the tension between immediate business needs and longer-term diversity goals. I argue that such scenarios underscore the need for robust talent pipelines that prioritize diversity to avoid last-minute compromises on recruitment diversity goals. The role of hiring managers in promoting or preventing diversity is crucial. As one recruiter put it,

"The managers have tons of good reasons not to recruit those different profiles. And ultimately, they are the ones owning the budget and making the decisions" (Recruiter3).

This shows how individual biases and preferences can influence hiring outcomes, even when organisations are committed to diversity. The observation of role models within an organisation plays a critical role in shaping the diversity behaviours and attitudes of hiring managers. This is supported by social cognitive theory and its extension to career development (Bussey & Bandura, 1999; Lent et al., 1994). Organisation is trying to correct the gender imbalance by giving preference to female applicants with equal qualifications.

"If we have two candidates, and they are on the same level, then I would say that we should take the woman because there are fewer women in the IT sector" (HRBP1).

This approach focuses on behavioural factors, with decision making reflecting the observed outcomes of similar previous decisions. Recruiters also play an important role in challenging the status quo and advocating diversity.

"So that's where we come in as a sometimes 'disturbing challenger' because it takes more effort from the hiring managers because they need to actually think" (Recruiter1).

This proactive questioning of traditional hiring practices is crucial for changing the corporate culture towards more inclusion. Ultimately, the need for a sustained commitment to diversity is clear.

"Many leaders express intentions to focus on diversity "some other time" due to immediate business pressures" (Recruiter1).

I argue that embedding diversity and inclusion as non-negotiable aspects of the recruitment process is essential. Such a commitment should be modelled by senior leaders and supported by consistent policies and practices to foster an inclusive culture.

Unconscious bias

Unconscious bias in IT hiring often manifests itself in subtle ways, influencing recruitment decisions that perpetuate gender inequality. If left unchecked, biases can severely impact the diversity of the hiring pool. A HRBP points out potential biases in management:

"Perhaps by us if you have a male manager, it could be biased towards male teammates" (HRBP3).

This admission reflects an understanding that environmental and personal biases can deter diverse candidates. Such environmental cues significantly shape individuals' behaviour and expectations, underscoring the need for proactive measures to eliminate these biases. During the recruitment process, decision-makers may unconsciously favour candidates who fit into the existing workforce, which can distort perceptions of competency and fit. One recruiter explains how this bias manifest itself when selecting candidates:

"When you recruit someone else, no... Uh, so send the short list. You have 4 candidates. If you have one woman and three men, the woman has zero chance to be recruited" (Recruiter3).

This scenario illustrates the central role of observational learning as described in SCT, where repeated exposure to male-dominated shortlists reinforces gender biases and inadvertently suggests that certain roles are better suited to men. Another recruiter describes the dilemma recruiters find themselves in:

"Automatically, you know, because of our biases, we will look at the female CV with a fear. Ohh what if what if she's not good enough?" (Recruiter3).

Such biases not only undermine the assessment of female applicants' abilities, but also prevent them from progressing in technology-oriented career paths because they are perceived as an obstacle. To mitigate these biases, it is important to adapt the recruitment environment to promote diversity and inclusion. Strategies include changing the way jobs are described and ensuring that candidate lists are balanced. Implementing these changes can disrupt the cyclical nature of reinforcing bias and promote a more equitable recruitment process that aligns with both SCT and SCCT by changing observational learning patterns and behavioural expectations within the organization (Lent et al., 1994; Byars-Winston et al., 2010).

6.1.4.Retention and Career Development Challenges

Awareness – Networking and Role Models

Networks and role models not only provide practical guidance, but also reinforce the feasibility of career paths through visible success stories that encourage women to advance in the IT industry. In addition, hiring practices that promote inclusion can have a significant impact on women's perceptions and their decision to enter or remain in the IT industry. One recruiter highlight:

"... there's a specific network with the ABC IT Company group called ... in the to. And they have a strong position in the company, and they always attract the strongest role models to the speakers, leaders, people, leaders within the tech industry (Recruiter1).

This initiative not only increases the visibility of female role models, but also actively counteracts stereotypes by showcasing successful women in the technology industry. I argue, Although the network plays an important role and its members are engaged, it is not clear how effective these efforts are in helping women to advance and be satisfied in their jobs. In the IT industry, the establishment of women's networks is recognized by 7 out of 9 respondents as a critical strategy to improve women's retention and career development. This is in line with SCCT, which emphasizes the role of support systems in career choice. An HRBP explains:

"... we have some female networks for women within the IT sector. That's also a good thing, I think. And for women to have the possibility to meet others within, with the same interest. And just focusing on female colleagues, so to say and share experiences at all and that's also a good thing." (HRBP1).

This practice facilitates learning through observation and community building, which is critical to supporting women's engagement in predominantly male fields. In addition, the influence of role models and mentors is highlighted as a powerful tool for career advancement, reflecting the recognition of learning through observation. One manager comment:

"I think networking, collaborating, being able to find mentors. At least that's what has worked for me. Finding role models, other women who have managed this landscape well, finding peers who you can hook arms with and the (Consultant) see this is how I see what, what do you say is to be able to have that second opinion." (Manager2).

Through these interlinked strategies, organizations can not only address the immediate challenges of retaining women and developing their careers, but also promote a broader cultural shift towards greater gender diversity in the IT sector. This holistic approach supports the development of a more inclusive environment that recognizes and leverages the full potential of all its members.

The Role of Support Systems and Feedback Mechanisms

The results from 4 of the 9 respondents underscore the importance of structured support and feedback systems and reflect the principles of the SCCT, which emphasizes personal, behavioural, and environmental factors in career development. Creating a supportive environment that addresses

the different communication needs of different genders is central to career development in IT. Managers recognize the need for more personal interaction, especially for women who may need more in-depth conversations to fully express their thoughts and concerns. As one manager notes:

"I make space for dialogue. We say women need more communication that's also for sure. They need more one-on-one than men. They also need time to decompress " (Manager1).

This tailored approach not only supports individual needs but is also in line with the principles of the SCCT, which emphasizes the role of a supportive environment for professional development (Lent et al., 1994). But it can also be argued here that the intention to support women can inadvertently reinforce outdated gender stereotypes by assuming inherent differences in communication style between the sexes. Such assumptions risk perpetuating biases and leading to unequal treatment in the workplace, which could undermine efforts to achieve true gender equality. In addition, empowerment within teams is vital to encourage active participation and involvement, particularly in technical discussions. One manager illustrates this by describing how empowerment influences team dynamics:

"If they are in an empowered environment where they take discussions and they're not afraid to tell their opinion when they are constantly cut, you can see very well." (Manager1).

This empowerment fosters a culture where all team members feel valued and confident to share their insights, directly impacting their professional growth and development. Encouragement to take on challenging roles and increasing visibility are crucial for advancing women's careers in IT. Managers play a significant role in this process by recognizing and validating the skills of their team members, especially women who might underestimate their own qualifications. For instance, one manager recounts the journey of a woman who did not see herself as qualified for an architect role until encouraged:

" I need to convince her that she was an architect because she only saw herself as project manager or as an analyst... I will hire you as an architect first...She was super uncomfortable, she said. No, I'm not going to survive. It's going to be difficult. She's one of the best architects..." (Manager1).

This example underscores the need for leadership support to help women recognize and realize their potential. This is consistent with the emphasis on the role of caregivers in developing self-efficacy. In addition, leaders recognize the importance of giving women the opportunity to express

themselves and receive recognition. By encouraging women to lead discussions and present their work, they help to raise their profile within the organization.

"I challenge them a lot to have to expose themselves, ...I always say I will be there and they're happy then I'm there. I always also never leave them alone." (Manager1).

This strategy not only boosts women's confidence but also enhances their visibility, crucial for career advancement.

Unconscious Bias and Career Development Challenges in IT

Unconscious bias continues to be a pervasive problem in the IT industry and affects women's career development opportunities. Despite the intention to create an inclusive environment, protective biases and assumptions often hinder equal career advancement. Eight out of nine respondents discussed various aspects of this issue, highlighting both negative and positive perspectives. One HR manager expressed optimism about overcoming biases, stating:

"Actually, I think the other way that I mean, even though we have less women. Or just because we have less women. If there are both male and female candidates. I really think that we can see beyond our bias when it comes to. When it comes to that, I don't think that's a blocker for us" (HRBP1).

This statement indicates an awareness of bias and a desire to counteract it, although the same expert acknowledges that it is difficult to be completely objective. One recruiter confidently claimed to have overcome prejudice during the recruitment process, stating:

"Even though we have fewer women...I really think that we can see beyond our bias" (HRBP1).

This assertion suggests an optimistic view of progress within their organization. However, this view may be too simplistic and underestimates the subtlety and persistence of unconscious biases that can permeate decision-making processes. In contrast, another HR representative acknowledged the potential for bias and admitted:

"I haven't seen it, but that doesn't mean it doesn't exist" (HRBP3).

This answer makes it clear how difficult it is to recognize and addressing biases that are not always obvious or admitted. But it can be also argued that this admission suggests a more cautious approach that recognizes the limitations of personal observations in identifying systemic problems, which is

crucial for eliminating hidden biases. Insights from managers further complicate the picture. One manager pointed to the cultural norms that influence professional behaviour:

"But also, I feel many times that the rules are made by men in terms of what is considered good performance or how you should behave in a meeting or everything is very much made by men. You are all set to behave like a man for you to be able to grow right." (Manager2).

This indicates that organizational cultures often still favour masculine norms and behaviours, which can alienate or disadvantage women who do not conform to these expectations. Additionally, the notion of protective biases was critically examined. One recruiter discussed the unintended consequences of these biases, explaining:

"Uh, your intention is to be caring like you know you want to be protective of a woman you're like, ohh, no. You know, I'm a I don't want to impose too much on you. I don't want to put too many constraints on you, so I'm not gonna give you that project because it's gonna be too much work. So, I want to protect you and I want to be protective. ...implicitly conveying the message that the woman is not capable" (Recruiter3)

While this protective attitude is well-intentioned, it can limit women's opportunities to take on challenging projects and tasks that are important for their professional development. These discussions underscore the need for continued education and proactive measures to break down unconscious bias in IT. If companies actively addressing biases, they can promote the professional development of all employees, regardless of gender. This is in line with the findings of Ahuja (2002) and Trauth et al. (2004), who emphasise the importance of HR policies that promote inclusivity and combat unconscious bias. Such policies create a supportive environment that enhances personal effectiveness and expands career opportunities, contributing to a more equitable workplace.

Other systematic Barriers to Women's Career Development in IT

Understanding and overcoming the challenges that stand in the way of women's career advancement in the IT industry requires not only recognizing biases, but also addressing a number of systemic and individual factors that influence career advancement. The sub-theme "Other systematic Barriers to Women's Career Development in IT" emerged from the interviews with 8 out of 8 respondents who identified various bias-related barriers to women's career development in IT. These findings highlight the role of environmental and personal factors in shaping career paths. This analysis is divided into three key areas: Compensation equity, career advancement preferences, and social & cultural constructs.

Compensation Equity and Transparency in IT

In the IT sector, ensuring compensation equity and transparency is fundamental to promoting gender diversity and equity. One HRBP emphasized the rigor of its compensation practices and highlighted efforts to eliminate gender inequities:

"We have finalized our analysis this year... It's very few cases actually where we can see that women have a lower salary... We make sure that we actually pay regardless of gender... Every year when we do the salary review, we make an analysis also based on the outcome..." (HRBP1).

In addition, the commitment to external checks and balances is underlined by the inclusion of union discussions in the remuneration process:

"Each year we do an equal pay analysis... and we have discussions with the unions regarding that report as well to make sure that we are on track" (HRBP2).

This commitment to fair pay reflects a culture that values fairness and strengthens the self-efficacy of female employees, which is critical to promoting equal opportunities in SCT (Bandura, 1986). Transparent pay practises build trust and are consistent with the organisational structures emphasised by SCT (Bandura, 1986). These practises not only uphold ethical standards, but also create a pathway to success for all employees, which is critical for maintaining motivation and commitment (Bandura, 1986; Lent et al., 1994). Such measures are essential to strategic efforts to promote diversity and inclusion in the technology industry.

Career Progression Preferences in IT

Preferences for career advancement within the IT sector provide important insights into the challenges and opportunities for women's career development. These preferences, which are shaped by both individual aspirations and organizational structures, align with social cognitive career theory (SCCT), which emphasizes the role of self-efficacy and outcome expectations in career choice. A manager from the IT sector explained the pronounced career preferences that can be observed among female employees:

"The kind of career progression and the kind of development they want is usually into more people-oriented roles... from an engineer, the first step might be more Scrum master than product owner" (Manager3).

This observation suggests that women in IT are often more inclined towards roles that emphasize interpersonal relations and management rather than deep technical expertise. According to SCCT, this could reflect both a response to the social environment and a strategic navigation of perceived role acceptability and success likelihood within the male-dominated tech space. Furthermore, another manager highlighted a broader trend affecting women's career trajectories:

"They start as developers, but they don't pursue deeper into technology, they pursue other parts around that within the industry" (Manager3).

This pattern indicates a divergence from technical pathways to roles perceived as more compatible with social and personal goals, which may be influenced by broader cultural narratives about gender roles and professional identity. Due to corporate cultures that devalue their technical contributions, women are often drawn into roles that are perceived as more supportive. This behaviour is consistent with SCT, which states that career choice is influenced by observed reinforcement (Bandura, 1986). Organisations can counteract these trends by diversifying career paths and changing the perception of women's technical roles to strengthen their self-efficacy in IT. This is consistent with the SCCT, which emphasises creating a supportive environment that increases self-efficacy and outcome expectations for underrepresented groups (Lent et al., 1994).

Social and Cultural Constructs in IT Career Development

Social and cultural constructs significantly shape the career development opportunities available to women in IT, often imposing barriers that are subtly reinforced through everyday organizational practices. These constructs are critical to understand through the lens of Social Cognitive Career Theory (SCCT), which suggests that personal factors, environmental influences, and behaviour interact to influence career choices. One poignant example of these constructs is the necessity for women to conform to male-dominated norms within workplace settings. A manager explicitly describes this dynamic, stating:

"How should you behave in a meeting or everything is very much made by men... It does not feel motivating in the long run" (Manager2).

This observation underscores the critical role of environmental factors in shaping women's career experiences and decisions. According to SCCT, such an environment can diminish self-efficacy and limit the perceived career possibilities for women. Another dimension of this issue is the extra validation women often need from male colleagues to have their professional contributions acknowledged. A manager illustrates this point by noting:

"If I don't have a man with me in the meeting to men's plain to the others... They will not listen to me" (Manager1).

This reflects a broader societal expectation and underscores the role of observational learning, where women in IT see that their success or credibility is often contingent upon male endorsement. The impact of gender norms on career progression is also echoed in the perceptions of women's performance and capabilities. As another manager reveals:

"The bias is everywhere... you always need to get a blessing of a man to proceed" (Manager1).

This narrative aligns the power of environmental and social barriers that shape behavioural outcomes—women in IT are often socially conditioned to doubt their capabilities and conform to external validations rather than internal convictions. Critically, these social constructs are not merely barriers but also potential areas for transformative action. Organizations can foster an environment that actively challenges these gender norms, promotes women's visibility without male endorsement, and values diversity in behavioural and professional styles. This proactive stance can empower women, enhancing their self-efficacy and expanding their perceived career paths within the IT sector. By addressing these cultural and social constructs directly, IT companies can create a more inclusive and equitable workplace that benefits from the full potential of all its members.

6.1.5. Workplace Culture and Work-Life Balance in IT

Workplace culture and work-life balance significantly impact retention and career development in IT, particularly for women. This theme, as discussed by 7 out of 9 respondents, highlights various organizational practices and policies aimed at creating a more inclusive and supportive work environment. The integration of SCCT and observational learning underscores how organizational norms and behaviour can influence individual career paths and satisfaction. The provision of enhanced parental benefits is a recurrent theme that aligns with the need for supportive work environments. An HR professional describes the approach:

"... gives some extra and that also gives women and men the possibility to stay at home on parental leave and still not be so impacted when it comes to salary" (HRBP1).

This policy not only supports gender equity but also enhances role modelling for both men and women, demonstrating the organization's commitment to family and career balance, essential for attracting and retaining diverse talent. Another critical aspect is the emphasis on flexible work

arrangements, which has become particularly relevant in the hybrid work model era. As noted by a manager:

"It's how I run meetings and workshops... to make sure that it's easy for everyone to be heard" (Manager3).

This practice of ensuring inclusivity in communication reflects a broader organizational culture that values diverse contributions, crucial for fostering a sense of belonging and engagement among all employees. Furthermore, the challenges associated with balancing professional and family responsibilities often disproportionately affect women. A manager elaborates on the cultural expectations that still prevail:

"Even though we say it is equally shared, the care right and some really care. I don't think it is equally shared" (Manager2).

This acknowledgment points to the ongoing need for cultural shifts within organizations to recognize and mitigate the double burden many women face. Critically, addressing these challenges involves more than just implementing policies—it requires a fundamental change in organizational culture. The effort to create a work environment that genuinely respects and facilitates work-life balance can lead to greater employee retention and satisfaction. By actively promoting and practicing flexibility, equity in caregiving responsibilities, and supportive career development practices, IT companies can better support all employees, particularly women, in achieving their professional and personal goals.

6.2. The female perspective in the tech sector

6.2.1. Women's Perception of the IT Sector

The perception of the IT sector by women working in this field in Sweden provides insights into their experiences, barriers and factors contributing to their underrepresentation. Based on interviews with 7 out of 8 respondents, this research integrates theoretical concepts from SCT and SCCT focussing on environmental influences, role models and observed learning experiences that shape women's careers in IT.

Work-Life Balance and Career Opportunities in IT

The integration of work-life balance and career opportunities in IT, this theme, explored by 7 out of 8 respondents, reveals both the appeal of the IT industry and the challenges that persist. Several

women in the IT industry emphasised the sector's potential for a balanced lifestyle, which is crucial to their career choice.

"It's a good path for everyone and but I think it's a good path for women as well... Often a good work-life balance and salary and problem-solving career growth" (Employee1).

This perception aligns positive reinforcements, such as a good work-life balance, increasing the attractiveness of a career path (Ahuja 2002). Regardless of the perceived opportunities, there are still challenges related to gender representation. The observation of an employee:

"It's a male-dominated field for sure... And as a woman, you become like a kind of a minority" (Employee1),

This highlights the social barriers that can diminish the appeal of IT for potential female entrants. Women in minority positions may experience less job satisfaction and higher pressure, impacting their long-term career commitment and development. While there is hope for gender parity in IT, reality shows a lag in achieving these aspirations. The desire for a future where:

"it might if possible, and if become, become 5050, that would be like ideal" (Employee1)

This emphasises the critical gap between current conditions and ideal outcomes. Such aspirations reflect an underlying belief in the potential for change driven by policies and practises that promote gender equality.

Gender Representation and Role Modelling in IT

The underrepresentation of women in IT roles and the scarcity of visible role models profoundly affect women's career trajectories, as noted by 7 out of 8 respondents. The importance of these factors can be analysed through SCT and SCCT, which highlight the impact of observational learning and role models in shaping career interests and perceptions of self-efficacy. One employee described her experience, stating:

"...sometimes being a woman in a field where it's male dominated" (Employee2).

This minority status can diminish one's sense of belonging and professional identity, which may lower self-efficacy and reduce persistence in the field. The lack of female representation can deter women from aspiring to or remaining in IT careers due to perceived barriers and a lack of relatable success stories (Armstrong & Riemenschneider, 2014). Despite aspirations for equality, the current reality shows significant gender disparity. An employee optimistically noted:

"I think in the future it will be very normal for women to be in tech: it wouldn't be anything unusual" (Employee1).

However, this ideal contrasts sharply with the present situation and underscores the need for strategic interventions to bridge the gap, this stresses the formation of career interests in environments where successful role models are visible. The lack of female role models in senior positions is particularly striking. An employee remarked on the absence of female leaders in her field:

"Maybe then continue to become more designed into like being a senior architect... I haven't seen any senior architect that are a woman. Only men" (Employee2).

The SCCT assumes that observing successful role models in certain professions can increase women's self-efficacy and inspire them to aspire to similar paths (Lent et al., 1994). This observation effect is of fundamental importance when it comes to encouraging women to enter professions in which they are underrepresented.

Aspirations for Gender Equality in IT

Aspirations for gender equality in the IT sector reflect a crucial shift toward recognizing and addressing the systemic barriers women face. These aspirations, highlighted by 7 out of 9 respondents, underscore the need for a concerted effort to foster an equitable workplace. One employee expressed optimism about the future, noting:

"...if possible, and if it became 50/50, that would be ideal" (Employee1).

This vision aligns with the role of environmental factors and learning through observation in shaping career aspirations. Achieving a balanced gender ratio can serve as a powerful motivator and role model for potential female entrants into the field. Despite the positive outlook, the reality remains starkly different, as another employee pointed out the ongoing male dominance in her team:

"And right now, it's... only me and then we have five male... and that's in this one smaller team" (Employee1).

This imbalance highlights the critical need for targeted strategies to enhance female representation and challenge the ingrained norms that SCCT identifies as barriers to women's career progression. From an employer's perspective, addressing these challenges involves creating supportive structures and policies. An HRBP emphasized:

"We compare women and men within the different jobs... we make sure that there is no difference" (HRBP1).

This practice of regular salary audits and equal opportunity helps to establish a fair environment that promotes equality.

6.2.2.Socio-Cultural Influences and Personal Aspirations

The underrepresentation of women in the IT sector in Sweden is influenced by a range of socio-cultural factors and personal aspirations, as highlighted by insights from 7 respondents.

Socio-Cultural Dynamics and Gender Stereotypes

Gender dynamics in the IT industry are influenced by deep-rooted socio-cultural stereotypes that characterise the professional landscape for women. Insights from 7 respondents highlight the persistent challenges and stereotypes that impact women's participation in IT. One respondent described early gender conditioning that discourages women from technology-related interests:

"You're good at that, but they don't think that. Ohh you would be a good developer... It's mostly men or boys, they grew up a lot already with technology" (Employee1).

This consideration illustrates SCT and shows how social norms shape personal beliefs and career choices (Aronson et al., 1999). Another participant noted how educational messages reinforce these gender norms, saying:

"When girl in high school, the teachers always said OK the uh umm man uh. Good at the physical chemistry... Girl is better to choose accounting" (Employee3).

This social message emphasises the SCT's focus on environmental factors that can reduce women's self-efficacy and limit their perceived career options (Tokbaeva & Achtenhagen, 2023). In addition, another interviewee described the subtle biases in the professional environment that challenge the credibility of women in male-dominated fields:

"Whenever you enter the room... sometimes it could be just who you are as a person. Because of that, you are a woman" (Employee2).

This experience shows how personal and environmental factors influence professional careers. Furthermore, male dominance in the technology industry is both a historical and current reality that impacts women's professional experiences (Tokbaeva & Achtenhagen, 2023), as stated by one of the interviewees:

"Yes (Men have an advantage over women), I would say it's probably mainly because the field is historically male dominated" (Employee3).

This finding emphasizes SCT's focus on how environmental barriers influence self-efficacy and career choice (Bandura, 1986). The narratives depict a sector where cultural stereotypes and gender norms hinder women's advancement. To overcome these challenges, targeted measures are needed to change the portrayal of gender roles in IT, ensure equal opportunities and promote a culture of diversity and inclusion within the organization.

Impact of Early Exposure and Interest in Technology

Early contact with technology plays a decisive role in career choices in the IT sector. This theme, emphasized by 7 respondents, highlights the gender disparities in terms of early exposure to technology and its impact on career aspirations. One respondent shared personal experience and emphasized how early exposure to technology sparked interest:

"I was very interested in tech since I was little... I went to a school where we had a robotics competition, which I found very fun" (Employee4).

This narrative supports that early positive experiences can increase self-efficacy and interest in certain career paths. Another interviewee discussed the broader influence of education, noting:

"From school, I started with science and AI... the gender amount is not equal, only men are more than girls" (Employee3).

This statement illustrates how the educational environment can reflect and reinforce social expectations and biases, affecting women's self-efficacy and sense of belonging in the technical field. In addition, the role of social encouragement is crucial, as another interviewee emphasized:

"I always had like the interest toward tech... my family and brothers were very supportive" (Employee4).

This support aligns with the SCCT, which emphasises the role of support systems and role models in transforming interests into career aspirations (Lent et al., 1994). These findings emphasise the importance of early engagement and social support in fostering an enduring interest in technology, particularly among women. Promoting early engagement through supportive educational practises and family encouragement can help narrow the gender gap in the IT sector.

6.2.3. Structural Barriers and Workplace Dynamics

The underrepresentation of women in the Swedish IT sector is significantly influenced by entrenched structural barriers and challenging workplace dynamics, as highlighted by discussions with all 8 respondents. This theme illuminates the unique hurdles women encounter in this field.

Extra Pressure to Prove Competence

A particularly telling remark illustrates the extra pressure to prove competence that women frequently confront:

"Sometimes being a woman in a field where it's male dominated, you might also be thinking of that kind of pressure that you have to excel or have to show yourself. You have to show that you are good, that you deserve to be here" (Employee2).

This sentiment, suggest that such environmental pressures can severely impact self-efficacy and career progression. The same respondent shared:

"I think it can be just being in this field sometimes when a woman is coming up with an idea, she has to prepare the idea better to be able to talk about it and not just freely say ohh. I have this idea La La, but you have to have been thinking about the idea and how to present it in a way that it's interesting" (Employee2).

This insight emphasizes the additional preparation women feel compelled to undertake simply to be heard, which can be demoralizing and exhausting. Another participant noted,

"And there was one time when I was going to hold an induction, the training, and at first I felt like they are not listening. They're not even focusing kind of. And it's probably because I was a lot younger than them. And a woman" (Employee4).

This example highlights how age and gender together can compound the challenges women face, requiring them to work harder to establish credibility in environments dominated by their male counterparts.

Negative inclusion experiences

Negative inclusion experiences were also commonly reported, underscoring a workplace atmosphere where women's contributions are often overlooked or undervalued:

"I can feel that some women can feel that they are getting what they're called getting the Princess passenger treatment because you're a woman" (Employee2).

This sentiment is echoed by another respondent:

"It's not the super inclusive, but it's a I know, like a lot of people are not trying to do that, and some people they are not thinking about it" (Employee1).

These experiences show that unfavorable interactions in the workplace can affect career interests and goals by negatively impacting self-efficacy and outcome expectations. A poignant reflection from another participant illustrates the subtle ways in which exclusion manifests:

"They don't trust her because she's a woman. I have no good explanation for that because I don't know the details. Lacking skills? But she has the same skills as the others and has been working as long as the others" (Employee5).

This statement reveals the often-inexplicable lack of trust placed in competent women, highlighting a barrier that is felt rather than seen. Additionally,

"Sometimes, I feel like some tasks and things are more just getting assigned to the younger guys and no one is even asking me if I would like to do something" (Employee6).

This experience underscores how opportunities are distributed within teams, often bypassing women, which could stifle their professional growth and reinforce feelings of exclusion. The need for validation from men emerged as a profound issue:

"If a woman asked the same question as a man, then maybe they would think about it differently... if it's a woman, they might wonder, 'Why was she asking that question?'" (Employee2).

This requirement for male approval underscores a deep-rooted societal and cultural bias that impacts professional interactions and perceptions within the workplace.

Unconscious Bias and Stereotypes

Additionally, unconscious bias and stereotypes continue to shape the dynamics women face in IT roles.

"One of the stereotypes is that women tend to advance into becoming more administrative, not more programming or technical stuff" (Employee2).

This stereotype not only limits the recognition of women's capabilities in technical roles but also influences their career trajectories, often directing them away from technical paths. Further expanding on the theme of stereotypes, another respondent explained:

"It took a very long time before I was asking, 'When can I have this so I can go to a higher level?' and it took like forever before that happened" (Employee8).

This delay in career progression opportunities for women reflects a subtle but impactful bias that can hinder their career advancement. Moreover, a critical observation was shared by another employee:

"And I also got questions about, oh, but can you buy some fika for the Friday? Can you arrange, can you send out the fika invitations? Can you, yeah. Things like that. And that question is never sent to a male colleague. It's always females" (Employee8).

Stereotyping not only confines women to traditional roles, but also undermines their professional contribution. To dismantle structural barriers in IT, organizations need to create robust support systems, conduct thorough bias training, and re-evaluate performance metrics. Making women's contributions more visible, ensuring equal opportunities for advancement and challenging stereotypes is essential to an inclusive IT workplace. SCCT emphasizes the importance of an environment that enhance self-efficacy and expands career opportunities for women (Lent et al., 1994).

6.2.4. Professional Development and Support Systems

When analyzing career development and support systems for women in the Swedish IT sector, a pattern of barriers and facilitators influencing career progression emerges. Key themes such as insufficient encouragement, inadequate mentorship and the influence of stereotypes are highlighted in the responses of all 8 participants, highlighting the complex dynamics at play.

Lack of Mentorship and Supportive Leadership:

A crucial barrier many women faces is the absence of effective mentorship and supportive leadership, which are pivotal for navigating professional landscapes. As one respondent notes:

"Umm, so I don't have a mentor for say it's supposed to have a mentor, but I don't really have anyone designated as a mentor" (Employee2).

This reveals a gap in structured support that can hinder professional growth. According to SCCT, inadequate mentorship can severely impact career choices and advancement, suggesting that formal mentorship programmes could significantly boost women's careers in IT. The recurring absence of mentors in many respondents' narratives points to a systemic problem within the industry.

"But how are we supposed to get more women? That's probably the question and I think one of the starting points is probably that there has to be at least one woman in a team or two women in a team for new women to want to join" (Employee2).

This statement underscores the necessity for mentorship and representation at all levels, which aligns with SCT's emphasis on the power of role models in shaping career trajectories. Another respondent lamented the informal and inconsistent support systems:

"I think if I would have more like a mentor in the beginning. I would not have had that much struggle" (Employee6)

This highlighting how the lack of formal mentorship programs can impede personal and professional development.

Encouragement and Role Models:

Conversely, positive role modeling and encouragement are cited as significant facilitators. Another woman shared:

"And or my boss. She was like a very good at, you know, making me feel welcome. And I she was also a woman, so it feels very safe, and it she was someone I looked up to" (Employee1).

This support reinforces self-efficacy and aligns with SCT, which emphasizes learning through observation, imitation, and modelling, underlining the importance of visible female leaders in IT. Positive encouragement and role models are key motivators for women in IT, as one participant emphasised:

"Yeah. And she was never afraid to speak her mind and speak her opinions, which I looked up to, no matter how it may. She might have sound. She. Was never afraid to say something stupid, you know, because it doesn't matter. People will listen to her" (Employee1).

This reflection illustrates how role models can inspire confidence and assertiveness in professional settings. Another recounted:

"I'm lucky that I have the boss that I have right now. She's a very good woman and she's like pushing for me to get, like, the salary that I deserve and like to upscale myself and stuff like that" (Employee4).

Such examples highlight the pivotal role of supportive leaders in empowering women and fostering a culture of growth and equality.

Impact of Self-Confidence:

Self-confidence, or occasionally the lack thereof, is frequently mentioned as a personal barrier. One participant reflected:

"And if we're talking about, you know, moving up to becoming like a lead or something like that and maybe that's a bit different, but as I see right now, I can't see anything hindering me except for my well self-confidence and what I believe I myself can achieve" (Employee1).

The intersection of SCT and self-efficacy is evident here; enhancing self-belief through supportive workplace cultures could mitigate these self-imposed limitations. Self-confidence emerges as both a personal challenge and a systemic issue influenced by workplace dynamics. One woman stated:

"...but and of course, when you were getting into areas where you are not that skilled at the beginning, of course, then it is always a bit of struggle. You know you have to go through that curve in order to " (Employee6).

This insight reflects SCT's focus on self-efficacy as crucial for career progression. Another described the psychological barriers:

"I think sometimes what can be hindering for women is also the mentally I mean, I was talking about that in the beginning where the mental part could be that you might be afraid to ask for support or that you feel like ohh no, they will just look down on me" (Employee2).

These comments underscore the need for a supportive environment that actively works to bolster women's confidence and visibility in the IT sector.

Perceived Neglect and Undermining of Skills:

The experience of being overlooked or not taken seriously is another recurrent theme:

"Sometimes I can feel that some women can feel that they are getting what they're called getting the Princess passenger treatment if called like that. It's and it's like because you're a woman" (Employee2).

This perception demotivates and perpetuates gender stereotypes which, according to the SCCT, can limit career aspirations and satisfaction by creating an environment in which women's contributions are undervalued. Despite the structural barriers that still exist in the IT industry, robust support systems such as mentoring programmes and the active promotion of women in technical positions can significantly improve their retention and success. A deliberate, strategic approach aligned with diversity and inclusion goals is critical to fostering a supportive workplace that promotes professional growth for all employees.

6.2.5. Work-Life Balance and Family Responsibilities

The integration of work-life balance and family responsibilities emerges prominently from discussions with 3 out of 8 respondents, illustrating the significance of flexible work arrangements in the IT sector for women. The flexibility to work from home, as one respondent noted:

"...means that I don't need to worry about daily preparations and can focus more on my work without the stress of commuting or dressing up" (Employee1).

This observation underscores the impact of workplace policies on personal efficacy and overall work satisfaction. Another practical aspect of accommodating female employees in the workplace relates to workplace amenities, which one respondent highlighted:

"...having like female hygiene products in the toilets... would be very good for those days where you have forgotten, and you don't have to ask around to every female at work" (Employee4).

This kind of support in the workplace not only addresses practical needs but also contributes to a supportive and inclusive work environment. Additionally, the responsibility towards family care often falls disproportionately on women, impacting their work commitments. As one employee expressed:

"I have two sons myself, and I chose to be home with them when they are sick or take care of the family. And I try to not work during the weekends and during the nights" (Employee8).

This reflects the ongoing challenge of balancing professional responsibilities with family care, a dynamic that can influence career progression and opportunities in the IT sector. The results make it clear that while some organizations are making progress on inclusion, a more comprehensive implementation of support measures is needed to promote the professional development of women in IT. By promoting work-life balance with practical measures and flexible policies, IT

organizations can attract a diverse workforce and help to reduce the under-representation of women in the sector.

6.2.6.Diversity Initiatives and Organizational Culture

The theme of Diversity Initiatives and Organizational Culture in the Swedish IT sector reveals crucial insights about the integration of gender diversity practices within organizational settings. Derived from the experiences of 3 out of 8 respondents, this theme underscores the pivotal role of organizational culture in fostering or hindering diversity. One respondent illustrated the slow but positive changes in their workplace, noting:

"...there's mostly men around me. I'm the only woman, but that's OK because more women are coming... So, I feel like changes are happening" (Employee2).

This reflects a gradual shift towards inclusivity, yet the pace remains a concern for many within the sector. The notion that "changes are happening" aligns with the organizational efforts to correct gender imbalances, albeit slowly, showcasing an evolving but still challenging landscape for women. Furthermore, the visibility of diversity initiatives—or the lack thereof—is a recurring theme. As another employee expressed:

"I think ABC IT Company is too far from that... I think the idea is good, but I can't see anything happening fast enough" (Employee2).

This sentiment points to a gap between the intentions of diversity policies and their practical implementation, suggesting that while policies may exist, their impact is not always apparent or sufficient from the perspective of the employees. Additionally, the need for more robust networking and support structures specifically for women was highlighted by respondents. One suggested:

"...it would be great to have more networking... so you get to know women from different departments or teams" (Employee2).

This idea supports the SCT component of role models and social support, emphasizing how professional networks can influence career development and a sense of belonging in the workplace. In terms of improvement, respondents argue for more transparent and effective diversity strategies.

"I would like to know how it looks like in the organization right now... knowing there are initiatives being made that we're trying to get more women in the field makes me feel secure" (Employee1).

This statement underscores the importance of clear communication about diversity efforts and their outcomes, which can enhance trust and engagement among female employees. The discussions reveal a consensus that while strides are being made towards enhancing gender diversity in IT, the pace and visibility of these initiatives often do not meet the expectations of female employees. By strengthening these efforts and ensuring they are well communicated and effective, IT companies can better support the professional growth and integration of women in the sector, aligning with broader goals of equity and inclusion.

6.3. Bridging the Gap: Aligning HR Strategies with Female Employees' Experiences in the Swedish IT Sector

The intersection of HR strategies and the experiences of female employees in the Swedish IT sector reveals a significant gap between the intentions of organisations and the actual impact of these strategies on women's career paths. This discussion brings together the challenges faced by HR professionals and managers in promoting gender diversity with the actual experiences of women in the industry, using SCT and SCCT as a detailed theoretical basis.

Dual Challenges in Organizational Dynamics

Challenges for HR and management: HR professionals and managers are instrumental in shaping recruitment, retention and development strategies that impact gender diversity in IT organisations. The findings suggest that despite well-intentioned diversity initiatives, hiring practises often fall short of effectively attracting and retaining female talent. Managers struggle with the balancing act between the urgent need to fill positions and the strategic goal of increasing female representation, resulting in hiring decisions that may not support long-term diversity goals.

The perspectives of female employees: Parallel to organisational challenges, female employees face a number of barriers to career advancement. Although the potential for career advancement in the IT industry is widely recognised, women continue to face significant barriers such as gender stereotypes, a lack of visible role models and inadequate support structures. These barriers not only impact their job satisfaction and career development, but also affect their long-term commitment to the industry.

Enhanced role models and mentoring: A key strategy is the implementation of role model and mentoring programmes, which play a crucial role in promoting learning by observation and emulation. By pairing female employees with experienced professionals in the IT sector, organisations can create a supportive environment that increases women's self-efficacy and career aspirations. This approach is supported by SCT, which highlights the importance of observational

learning, where behaviours and attitudes are matched with observed role models. SCCT also emphasises the importance of role models in improving women's career choices and self-efficacy.

Inclusive hiring and recruitment practises: Inclusive hiring practises are important to change the environment and positively influence the perception and behaviour of potential candidates. Organisations should develop recruitment practises that explicitly address and neutralise gender bias. This includes ensuring that job descriptions are free of gender-specific language and clearly state the organisation's commitment to diversity and inclusion. Such practises are in line with the SCT's suggestion that the environment influences behaviour through social cues and learning, and that adapting these cues can lead to more inclusive behaviour from potential applicants.

Visibility of diversity initiatives: The visibility of diversity initiatives must be actively promoted and communicated both internally and externally. Being transparent about these efforts can increase the company's commitment to diversity, attract more female applicants and boost the confidence of current employees. According to the SCCT, people form their career interests based on the perceptions of those around them. Therefore, a visible commitment to diversity can positively influence women's expectations and increase their commitment to the organisation.

Work-life balance policies: Finally, improving and promoting policies that support work-life balance — such as flexible working hours, teleworking, and parental leave — is crucial. These measures should be emphasised when recruiting applicants in order to meet the preferences of potential female employees. The SCT shows that environmental factors and observed benefits significantly influence individuals' behaviour and attitudes towards their workplace. By creating a conducive work environment, organisations can strengthen the belief in women's personal achievement and thus increase job satisfaction and retention.

Bridging the gap between HR strategies and the experiences of female employees in the Swedish IT sector requires concerted action to understand and address both the structural and experiential challenges that hinder gender diversity. By integrating the theoretical insights from SCT and SCCT, organisations can develop more effective strategies that not only promote the recruitment and retention of women, but also support their career development and satisfaction. This holistic approach promises not only to improve gender diversity in the IT sector, but also to enrich the entire industry by realising the full potential of its workforce.

Chapter 7. Conclusion

This study has explored the multiple challenges and dynamics of promoting gender diversity in the Swedish IT sector, focussing on the dual perspectives of HR managers and female employees.

Despite concerted efforts and intentions to improve gender diversity, there are still significant gaps between corporate strategies and the actual experiences of women in the IT sector.

From an HR perspective, the findings reveal a complex landscape of recruitment challenges, including bias in job descriptions and the ongoing problem of attracting female talent to a traditionally male-dominated environment. In addition, there are structural barriers that hinder the effective implementation of diversity measures, such as an urgent hiring need that often overshadows long-term diversity goals. Furthermore, the study emphasises the critical role of HR in fostering an inclusive culture through proactive diversity initiatives and adapting hiring practises that intentionally mitigate gender bias.

In addition to these organisational challenges, the experiences of female employees in the IT industry also highlight persistent barriers. These include the lack of visible role models, gender stereotypes that influence career aspirations and trajectories, and inadequate support structures that could promote career development and job satisfaction. Women continue to navigate a landscape characterised by unequal opportunities, often exacerbated by subtle biases that shape their day-to-day work experiences and long-term career prospects.

Importantly, this study has not only identified the barriers, but has also highlighted potential facilitators that could bridge the gap between current practises and a more equitable workplace. Enhanced role modelling and mentoring programmes have emerged as key strategies to support women's career development by fostering an environment rich in observational learning and positive reinforcement. In addition, visibility of diversity initiatives and transparent communication about these efforts are critical to fostering an inclusive corporate culture that caters to the career aspirations of women in IT.

The integration of work-life balance measures underscores the notion that organisational practises can have a significant influence on personal and professional satisfaction. By prioritising flexibility and supportive parenting policies, organisations can attract a more diverse workforce while improving the retention and satisfaction of their current employees.

Bridging the gap between HR strategies and the experiences of female employees requires a nuanced understanding of the complexities involved and a dedicated approach to implementing strategies that address both structural and experiential barriers. The findings of this study contribute to the broader discourse on gender diversity in the tech industry and offer actionable insights that can help Swedish IT companies create a more equitable and inclusive environment. This in turn not only improves the professional lives of women within the sector, but also enriches the industry by realising the full potential of its diverse workforce.

Further research should focus on assessing the impact of gender-neutral job descriptions and recruitment practises on attracting female talent to the IT sector and their impact on long-term career satisfaction and retention. At the same time, strategies should prioritise the continuous assessment and adaptation of HR policies to eliminate unconscious bias and promote the career advancement of women and ensure that these measures are actually implemented with full commitment.

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Appendix A: Interviewee Consent

CONSENT

Information for participants about the master's project:

“Underrepresentation of women in IT in Sweden: Understanding the challenges.”

The aim of this research is to critically examine and understand the persistent underrepresentation of women in the IT sector in Sweden, despite progressive policies and strategies designed to promote their inclusion. This topic is of great importance as it aims to uncover the nuanced barriers that continue to hinder women's entry and advancement in the tech industry. By examining the complexities of women's self-efficacy in the IT industry, this study will shed light on the discrepancies between the intended and actual effects of HR policies and management strategies on women's inclusion. Although there is an extensive literature on discrimination and bullying, there remains a glaring gap in understanding the specific factors that prevent women from participating fully in technical fields. This research aims to address this gap by providing new insights and contributing valuable knowledge that can serve as a basis for more effective interventions to promote women's engagement in technology.

This research is part of a student-led project that will culminate in a master's thesis in Strategic HRM and Labor Relations Analysis at the University of Gothenburg. It will be conducted independently by Neha Keshari and supervised by Professor Vedran Omanovic, Senior Lecturer at the Faculty of Business Administration.

Further contact information can be found below.

Data collection

The methodology for data collection is based on a qualitative framework using structured and open-ended interviews as the primary tool for gaining in-depth insights. The cohort for these interviews includes a diverse group of stakeholders, including HR professionals, managers, and female employees, as well as data from non-governmental organizations (NGOs) actively working to advance women in the technology sector. Each interview is carefully scheduled and lasts approximately 45 minutes, allowing enough time to fully explore participants' perspectives.

Interviews are conducted in private to ensure that individual experiences and viewpoints are taken into account. This one-on-one interview format was chosen to create an environment in which participants can speak freely and openly about their experiences.

To maintain the ethical standards of the research, all interviews will be recorded with the explicit consent of the participants. Prior to each session, participants will be informed of the purpose of the research, the nature of the questions and their rights during the study, including confidentiality and the voluntary nature of their participation. They will be assured that their identity will be anonymized in any subsequent reporting or publication of the research findings. This informed consent process is not only a fundamental ethical requirement, but also strengthens the validity of the data collected.

Voluntary participation and confidentiality

Participation is voluntary and confidential. Participants can end their participation at any time and have the right to withdraw from the study if they so wish.

Unauthorized persons have no access to the material and the persons involved in the project are bound to confidentiality.

Confidentiality is maintained during the transcription and analysis of the interview data by omitting personal names. Instead, participants are assigned pseudonyms that are used in place of their real names to ensure anonymity. This practice also applies to organizations that prefer to be addressed with a pseudonym to protect their privacy.

Participants have the option to choose the time of their interview and can also conduct the interviews online if they deem it appropriate. The study respects participants' autonomy and allows them to participate in the study at times that are compatible with their schedules and preferences. This ensures that the study meets the conditions set by the participants themselves.

Handling of the collected material

The collected material, including audio recordings and notes, will be stored securely on password-protected computers and will only be accessible to people who are authorized to handle this data. The transcribed material, which includes the detailed content of the interviews and supplementary notes, will be converted into a digital format for analysis purposes. The final thesis may contain selected excerpts from the interviews, which are given pseudonyms to ensure the anonymity of the interviewees.

All material will be collected and used solely for the purposes of the master's thesis and may be published electronically by the University of Gothenburg. After completion of the master's thesis, the transcribed interview files will be deleted.

Results and publication

The results of this research will be summarized and disseminated in a master's thesis, which is expected to be completed by May 30, 2024. Upon completion, participants and other interested parties will have the opportunity to view and download the document from the Gothenburg University Publications Electronic Archive (GUPEA) at <https://gupea.ub.gu.se/handle/2077/832>. In addition, participants are welcome to attend the forthcoming public presentation of the project, details of which will be announced in due course.

For questions and further information, please contact:

Your name: Neha Keshari

Phone: XXXXXXXXXX

E-mail: XXXXXXXXXXXXXXXX@gmail.com

Responsible Supervisor: Professor Vedran Omanovic,

Department of Business Administration

NN

Titel: Senior Lecturer

Phone: XXXXXXXXXX

E-mail: XXXXXXXXXXXX@handels.gu.se

Consent to participate.

I have read and fully understood the scope and implications of participating in this student MA project. Any questions I had were answered satisfactorily.

☐ I agree to participate, and that the interview can be digitally recorded and agree

☐ I agree to my personal details being handled as described above.

Date and place	Name and Signature (participant)
Date and place	Name and Signature (student)

Appendix B: Interview Questions

HRBP or People and Culture:

- 1) Can you introduce yourself and briefly explain your role in your HR team?
- 2) What challenges do you face when it comes to attracting and retaining women in the IT sector?

- 3) How do you assess the effectiveness of your HR strategies in addressing the underrepresentation of women in the technology sector?
- 4) In your experience, what are the most common barriers that women face in their career development in the IT sector?
- 5) Do you observe that gender biases and assumptions, such as 'men are better suited to technical roles', hinder women's career progression?
- 6) How has our company adapted its working environment to meet the needs and preferences of women in IT?
- 7) How do we ensure fair treatment of all employees, especially in addressing gender inequalities within IT teams?
- 8) What mechanisms do we have in place to monitor and address any instances of discrimination or bias?
- 9) Could you explain the steps we have taken to ensure equal/Fair pay for men and women in comparable IT positions?
- 10) How do we ensure transparency in our salary review processes to support our commitment to equal pay between men and women?
- 11) Can you explain the specific training and awareness programs we have in place for employees and managers to mitigate unconscious bias and promote equality?
- 12) How does our company collect feedback from women about their experiences in the organization?
- 13) How is this feedback used to improve our practices and address challenges related to promoting gender diversity and inclusion in technical professions?
- 14) Based on our discussion today, what do you believe are the most critical steps that organizations can take to improve gender diversity and inclusion in the tech industry?

For Managers:

Please keep in mind, this conversation is not an assessment or evaluation. It is about exploring the challenges managers face in promoting gender diversity. Your honest insights will help my study find the correct outcome.

- 1) Can you please introduce yourself and briefly describe your leadership role?
- 2) What is the ratio of men to women in your team?
- 3) How important do you think it is to have a gender-balanced team?
- 4) What benefits have you observed from having a gender-balanced team in IT?
- 5) What challenges do you face when trying to recruit and retain women for technical positions?
- 6) Have you found that gender biases, such as the assumption that 'men are better suited for technical positions', hinder the career development of women in IT?
- 7) How do you ensure that recruitment, growth assessment and salary reviews are not influenced by unconscious gender bias?
- 8) What challenges do you face to keep your female team members motivated, engaged and confident?
- 9) How do you ensure that the work environment meets the needs and preferences of women in IT?
- 10) Do you notice a difference in confidence between men and women in technical discussion?

- 11) How do you encourage all team members, especially women to express their thoughts confidently?
- 12) In your experience, what obstacles do women often face in their professional development in the IT industry?
- 13) How do you deal with common challenges faced by women in the IT industry, such as pay gaps, invisible work and promotion opportunities?
- 14) Have you participated in any training or awareness programs to reduce unconscious gender bias?
- 15) To what extent do you feel supported by your company in your efforts to tackle the underrepresentation of women? What additional support would be helpful?
- 16) Based on our discussion today, what do you think are the most important steps companies can take to improve gender diversity and inclusion in the tech industry?

For Talent Acquisition / Employer Branding:

- 1) Can you please introduce yourself and briefly describe your role?
- 2) What strategies does your organization employ to attract female candidates to technical positions?
- 3) Can you discuss any innovative or targeted recruitment initiatives aimed at increasing the representation of women in your organization?
- 4) How do you believe gender biases and assumptions affect the hiring process and career growth for women in tech roles?
- 5) Do you think there are common misconceptions about men being better suited for tech roles than women? How does this impact recruitment and career advancement?
- 6) What are the biggest challenges you face in talent acquisition, particularly in attracting diverse candidates?
- 7) Do you observe any specific challenges related to career choices among women in the tech industry?
- 8) How do you prioritize diversity and inclusion in your talent acquisition strategy?
- 9) How effective do you find these talent acquisition strategies in addressing gender gap?
- 10) How do you measure the effectiveness of these efforts?
- 11) How does your organization raise awareness among women about career opportunities in the tech industry?
- 12) How does your organization gather feedback from women employees regarding their experiences in the hiring process and career development opportunities?
- 13) Based on our discussion today, what do you believe are the most critical steps that organizations can take to improve gender diversity and inclusion in the tech industry, particularly in the talent acquisition process?

For women employees:

Please keep in mind, this conversation is not an assessment or evaluation. It is about exploring the challenges managers face in promoting gender diversity. Your honest insights will help my study find the correct outcome.

- 1) Can you introduce yourself and your current role?
- 2) What is your total experience and experience in ABC IT Company?
- 3) Did you have any other career choice before IT?
- 4) Why have you chosen Tech as your career path? – When did you develop this interest?
- 5) Do you think tech is a great path for women? – Why do you think so?
- 6) Where do you see yourself in the coming future and long term? – Why do you think so?
- 7) Do you see any challenges? Or something that can help you make better progress?
- 8) Are you happy with the speed of your progress?
- 9) Do you observe progress is faster for male tech employees in general? How do you feel about it, does it affect your self-confidence?
- 10) Do you observe there are less women in Senior tech roles, like solution architect, tech leads etc.? – What could be the reasons in your opinion?
- 11) How confidently do you share your ideas, thoughts and critical opinions in your team? – Do you feel your opinions are taken seriously?
- 12) How many men and women are in your team?
- 13) What are the challenges or obstacles for women in career development in this field?
- 14) Have you felt treated differently because you are a woman?
- 15) Do you think men have an advantage over women in the technology industry?
- 16) Have you ever noticed that women's ideas were ignored or not taken seriously? >> Does this in any way affect your motivation or anything else?
- 17) How has having mentors around, or not having any, affected your job in the tech industry?
- 18) You've probably heard this company is pushing for diverse workplaces and bridging the gender gap. Do you think these strategies are making a difference?
- 19) Based on what you have seen or experienced, what changes would make your workplace more women-friendly? Suggestion to management or HR.
- 20) When you think about your future in the tech industry, what do you hope for, based on the current situation?