Understanding Gender Differences in Digital Readiness During Digital Transformation in Accounting Functions: Accounting Professionals' Perspective

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ABSTRACT

Manuscript type: Research paper
Research aims: To examine gender differences in digital readiness during digital transformation in accounting functions, addressing a knowledge gap in current accounting literature.
Design/Methodology/Approach: Survey of 297 accounting professionals (180 men, 117 women) with 27 questions on digital readiness perceptions, analysed using exploratory factor analysis and one-way analysis of variance (ANOVA) tests.
Research findings: Women exhibited higher overall digital readiness than men, particularly feeling more empowered by senior management and better equipped to continue job tasks during digital transformation. No gender differences were found in perceptions of knowledge and skills, barriers, or organisational strategy.
Theoretical contribution/Originality: Challenges traditional stereotypes about women's technological capacity by demonstrating higher perceived

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digital readiness among female accountants. Refutes previous research suggesting women experience greater anxiety toward IT use, indicating changing gender dynamics in the accounting profession.
Practitioner/Policy implications: Organisations should recognise that women can play an important role in digital transformation initiatives. Avoiding gender bias in talent management during digital transformation projects is recommended, as both genders bring different values to these efforts.
Originality/Value: Provides empirical evidence that challenges traditional gender stereotypes in technology adoption and highlights the importance of understanding gender diversity for improving management of digital transformation projects in accounting contexts.

Keywords: Digital transformation, digital readiness, gender, accounting professionals
JEL Classification: M15, J16, M41, O33

1. Introduction

To stay ahead in the increasingly complex and volatile market, businesses are undergoing transformation (Goh et al., 2023). Digital technologies are a catalyst in accelerating transformation in organisations, often with an aim of strengthening the value proposition of the existing business (Fernandez-Vidal et al., 2022). This phenomenon is called digital transformation in organisation (Pan & Shankararaman, 2023), which involves the process of using digital technologies to create new—or modify existing—business models and processes, application and tools, culture, and customer experiences to meet changing business and market requirements (Tekic & Koroteev, 2019). In recent years, digital transformation has taken hold of accounting processes and systems in organisations at a rapid pace (Yigitbasioglu et al., 2023). The accounting function is well placed to reap the benefits digital technologies have to offer (Pan & Lee, 2020), as it involves end-to-end finance operations, financial planning and analysis, balance sheet reconciliations, improvements to procedures, and controls that utilise significant technological applications (Warren et al., 2015). According to Gartner's *Digital Future of Finance* report (2023), 69% of CFOs said digitalisation initiatives are accelerating, and most of them expect digital technologies to dramatically transform accounting functions by 2026.

While it is clear the accounting function is able to benefit significantly from digital transformation, its implementation is often fraught with problems. According to the literature, lack of digital readiness is a major reason why digital transformation initiatives

may not succeed (Bhattacharya et al., 2022). Digital readiness refers to the level of behavioural competencies, cognitive skills, and digital proficiency of an organisation's employees that help them to adapt and manage the digital transformation process (Wrede et al., 2020). According to Gfrerer et al. (2021), at the individual level, digital readiness is about self-perceived readiness, rather than one's actual level, to start adapting new technological applications (Heavin & Power, 2018). Employees' perceptions are the filter through which individuals in the organisation decide whether there is a need for change and whether their organisation is capable of implementing it (Schmidt et al., 2020). During digital transformation in accounting functions, employees will have to prepare themselves to embrace change and to understand how the change aligns with the overall business goals (Horlacher & Hess, 2016).

Different genders may have divergent perspectives concerning opportunities and risks posed by digital transformation (Trauth & Quesenberry, 2006). Organisations should recognise the importance of diverse talents in their team, and the role women might play in their digital technology projects, which is critical in digital transformation success (Adam et al., 2006). Nevertheless, the extant literature seems to be inconclusive as to how women react and respond to technology adoption. While understanding and responding to gender diversity in digital readiness appear to be critical in digital transformation, it is somewhat surprising that the association between gender and digital readiness has received little attention in accounting literature. In particular, the ways in which different genders perceive and respond to the adoption of digital technologies in accounting functions remains unclear. Neglecting the influence of gender diversity in digital readiness as a key driver of digital transformation in accounting functions is an important research gap that needs to be investigated. Accordingly, this study aims to examine the following research question: what is the role played by gender in accountants' perceptions of digital readiness during digital transformation in accounting functions?

This study contributes to the theoretical framework around gender differences in digital readiness, particularly in the accounting profession. The finding that female accountants show a higher degree of perceived empowerment and job execution readiness corresponds with and expands the work of Gfrerer et al. (2020), who find that perceptions of digital readiness vary between managers and employees. The implication is that gender dynamics shape how digital readiness is perceived and how technology is implemented in

professional settings. Moreover, our findings refute the traditional stereotype of women's anxiety towards IT use. This points to a change in gender-related technological viewpoints and warrants further research. This paper contributes to the increasing corpus of research stressing the importance of a sophisticated knowledge of gender in the framework of digital transformation. In terms of practical implications, accounting firms and practitioners can use these findings as the basis for creating supportive environments that foster digital readiness among all employees. Organisations can develop training courses tailored to the demands of their workforce in acknowledgment of the finding that both male and female accountants view their digital abilities similarly. This would help to ensure that every employee feels enabled to interact with digital technologies.

The rest of the article has the following structure. In the next section, the literature review is presented with a focus on digital transformation in accounting, digital readiness, and gender diversity in digital transformation. This is followed by the research methodology section and the results analysis section. In the end, discussion and implications of the study are presented, followed by limitations and future research.

2. Literature Review

2.1 Digital Transformation in Accounting

Digital transformation in accounting is one of the important sectors to witness revolutionary changes in established business models and of the way in which business is conducted (Sitaram et al., 2022). Digital technologies are having a significant impact on accounting functions (Ibrahim et al., 2021). In particular, it rearranges the processes, routines and capabilities, and changes the business logic of a firm (Pagani & Pardo, 2017). From big data analytics to the Internet of things and blockchain (Verhoef et al., 2021), the accounting profession is embracing a new era of digitalisation that will change the way traditional accounting practices, from record-keeping to reporting requirements, are carried out (Kommunuri, 2022). The role of these accounting professionals will shift to become highly valued, in a higher chain, and move into new areas and opportunities (Leitner-Hanetseder et al., 2021).

With increased automation and digital technologies, accounting professionals are expected to adapt and adopt the changes bring about by digital transformation (Gonçalves et al., 2022). Existing

accounting literature highlights that accounting functions can benefit significantly from digital transformation. For example, Issa et al. (2016) suggest that accounting activities and processes are primed for automation owing to their laborious tasks and wide range of decision structures. Kokina and Blanchette (2019) also suggest that the accounting function can drive productivity through automation of processes, which may bring about increased efficiency, improved decision-making, and an enhanced control environment.

Prior studies have also identified several challenges of implementing digital transformation. For instance, Loh and Ashton (2019) highlight a number of factors that may contribute to the failure of process automation projects. These factors include the lack of readiness, getting the execution wrong and the lack of ongoing technology management (Sangster et al., 2009). Despite the tremendous impact of digital transformation on firms and its broad coverage in the media, there is almost no empirical study in the accounting literature that focuses on the implementation of digital transformation in accounting functions (Hausberg et al., 2019), which limits our ability to understand this important phenomenon. This understanding is vital for leveraging the benefits of digital transformation in accounting. Organisations could better navigate the complexities of digital transformation in the accounting function, leading to a smoother transition with improved efficiency, enhanced decision-making, a stronger competitive position and maximising the benefits of organisations' investment in digital technologies.

2.2 Digital Readiness in Digital Transformation

Successful transformation of a company in the digital age requires strong change management and a sound understanding of digital readiness (Jafari-Sadeghi et al., 2021). It is important to take the necessary action to guide the organisation and its employees through the digital transformation journey (Narbariya et al., 2022). It is clear that digital transformation and the inherent change in organisations necessitate an individual's readiness to practice new behaviours (Zhang at al., 2022). Readiness refers to "the level of preparedness to execute a desired action or achieve the intended outcome, change or state" (Gfrerer et al., 2021). Readiness occurs when the environment, structure, and attitudes of the organisational members are receptive to forthcoming change (Halpern et al., 2021). Individuals' readiness matters, as it is a precursor to an intended behaviour.

In digital transformation, digital readiness represents a specific change scenario where digital technologies play a major role (Nguyen

et al., 2019). It is a context-specific operationalisation of change readiness, adding certain tech-specific challenges, attitudes, and capabilities (Lam & Law, 2019). The digital aspects include changes that are necessary for organisations and individuals to make use of digital technologies and to develop a positive attitude toward these technologies (Sia et al., 2021). Individuals must perceive themselves as being capable of meeting the expectations and of fulfilling the job tasks that digital transformation requires (Gfrerer et al., 2021). This may include knowledge of digital business models and digital technologies as well as their skills to embrace and use new digital technologies in their jobs (Grosu et al., 2023). Lack of digital readiness is cited as a major hurdle to the success of digital transformation (Afroze & Aulad, 2020; Holmström, 2022).

Employee attitude is one of the most significant predictors of the success of digital transformation and is therefore crucial to study. The successful shift from traditional to digital processes depends upon the attitude of employees towards digital transformation, as this may influence their intention to introduce and use modern solutions within the organisation (Kokina & Blanchette, 2019). Managers are said to function as role models and have to lead the organisation and its employees in digital transformation. In the context of change readiness, role modelling requires the manager's own readiness and employees' trust in the manager's ability to successfully implement the desired change. Employees' perceptions of role models constitute a cognitive precursor to their own response to change (Kilfoyle et al., 2013). Only managers who believe that they feel prepared and can make the change happen are able to spread the confidence and trust necessary to convince their employees to embrace the change.

An aspect that has been widely neglected in the accounting literature is the gender diversity effect on digital readiness during digital transformation in accounting functions (Fernandez-Vidal et al., 2022). By acknowledging and addressing the gender diversity effect, organisations can enhance their digital transformation efforts and digital readiness, ultimately leading to better outcomes in accounting functions and beyond. A sound understanding may also help to improve digital transformation talent and team management in accounting projects.

2.3 Gender Diversity in Digital Transformation in Accounting

Understanding the reasons for gender differences in the acceptance of new technologies can aid the overall development and implementation of the technology (Tavera-Mesias et al., 2023;

Korte & Bohnet-Joschko, 2023). According to Gfrerer et al. (2021), innovation theories demonstrate that gender diversity in the management team provides assets that are needed for an impactful innovation and digitalisation process. In reviewing the literature on technology usage, Goswami and Dutta (2015) identify gender as an important factor in explaining human acceptance of technology. Differences between men and women have been studied in a variety of areas, including email, information seeking, online learning, communication technology, and online shopping behaviour, with the majority of research being studied skewed towards men compared to women (Orji, 2010; Althubaiti et al., 2022). Awang et al. (2022) highlight that different genders may have divergent perspectives concerning opportunities and risks posed by the digitalisation process. Alam et al. (2022) further suggest that different determinants of digital transformation may influence male and female managers' perceptions. Their study also suggests male and female managers differ in their perceptions regarding the adoption of digital transformation. Overall, it is important to consider the effect of gender diversity on the adoption of digital technologies (Zahoor et al., 2023).

Interestingly, Venkatesh et al. (2003) suggest that women are more anxious than men about IT use, which influences their self-efficacy, leading to a greater awareness of the effort required to use digital technologies. Similarly, Cai et al. (2017) find that men have a more favourable attitude towards the use of technology than women. Blasko et al. (2020), however, note that it is incorrect to argue that women are less willing to adopt technology; rather, the adoption of technology among women is dependent on the use of the technology for the tasks at hand. In addition, in Hsiung and Wang's (2022) study on the implementation of robotic process automation (RPA) at a professional service firm, the results suggest that men are significantly positively correlated with success factors. In a separate study, Zeike et al. (2019) highlight that female managers have a positive attitude towards changes in the technological environment, which has effect on the usage of digital technologies. Similarly, Segovia-Pérez et al. (2019) report that female managers are more receptive to change, and take a more proactive approach compared to their male counterparts. Abdi et al. (2022) even suggest women have a slightly higher average answer than men in the number of indicators of digital readiness. Overall, the extant literature suggests the relationship between gender diversity and the level of technology acceptance among managers in digital transformation remains

inconclusive and warrants more research.

As the digitalisation of the accounting profession is driven by technological advancement, the gender of future accountants may influence digital transformation (Saengsith & Suntraruk, 2023). Thus, studying the gender differences in technology readiness towards digitalisation among accountants is timely. Overall, a successful implementation of new technologies requires diversity management and a target-oriented understanding of accounting professionals' technical readiness to design differentiated implementation processes that address the individual needs of accounting professionals. By addressing this gap in the accounting literature, this paper will offer valuable knowledge to practitioners and organisations that are navigating the seemingly uncertain spheres of digital transformation in accounting functions.

3. Research Method

3.1 Design and Procedure

To examine the research question, a survey was conducted with participants recruited from Prolific, a web platform that provides participant pools for online experiments. It is commonly used for conducting experiments and surveys in academic research, including with respect to obtaining insights from executives from the accounting and finance sector (Palan & Schitter 2018; Huber & Huber 2020). Participants were paid GBP1.50 to take part in the study. To ensure that our participants represent appropriate proxies for executives from the accounting and finance sector, only participants who met the following screening criteria participated in the study: (1) aged 21 years and above; (2) have decision making responsibilities in accounting and/or finance; (3) have a minimum approval rate of 95% on Prolific; and (4) have a minimum of three previous submissions on Prolific. The survey was administered using Qualtrics. In total, we recruited 310 participants. We dropped nine participants who provided incomplete responses. Given our focus on examining differences in male versus female accounting and finance professionals' perceptions of digital readiness, we also dropped four participants who selected 'other' as their gender, leaving us with 297 participants.

As our focus is on examining gender differences, we intend to conduct independent t-tests to examine differences in survey responses by male versus female participants. To examine the suitability of our sample size, we conducted a power analysis, which

provides the probability of observing a statistically significant effect in an independent t-test given that the effect exists. We used Lakens' (2017) power analysis tool with the following test assumptions: alpha of 0.05 and Cohen's d of 0.05. When the sample size per condition is 85 (150), the statistical power of the test is 89.99% (99.08%). Given that prior studies indicate that a minimum statistical power of 90% is required (Lakens 2017), our power analysis suggests that the minimum sample size in our survey is approximately 170 participants (i.e., 85 participants per condition; two conditions in our independent t-tests). Our power analysis also suggests that, with our sample of approximately 300 participants, the probability of us observing statistically significant effects in our t-tests, given that the effects exist, is 99.08%. Overall, this provides assurance that our sample size is appropriate.

In the survey, participants were first asked to provide demographic information about themselves. Next, participants were provided with a short introduction about digital readiness. They then provided ratings for 27 questions adapted from Gfrerer et al. (2021) relating to their perceptions of digital readiness.[1] Participants made their ratings on 15-point scales with zero as the mid-point and -7 (+7) corresponding to negative (positive) ratings of each aspect of digital readiness. Finally, participants were asked to provide open-ended responses about the role played by digital readiness in digital transformation and how digital readiness may be strengthened to prepare for digital transformation. Overall, participants took a mean (standard deviation) of 9.55 (7.20) minutes to complete the survey.

4. Results

Our research question examines the role played by gender in accounting professionals' perceptions of digital readiness during digital transformation in accounting functions. To answer this question, we adopted a two-step approach in our analysis. First, we conducted exploratory factor analysis (EFA). EFA is a statistical technique used to identify the underlying relationships between observed variables by grouping correlated variables into factors, thereby simplifying data interpretation (Costello & Osborne, 2005; Yong & Pearce, 2013). Accordingly, we used EFA to identify constructs relating to participants' perceptions of digital readiness. Second, we used one-way analysis of variance (ANOVA) tests to examine gender differences in participants' perceptions of our constructs relating to digital readiness. Using one-way ANOVA tests is a statistically appropriate way to examine these differences

as it compares means across three or more independent groups to determine if at least one group mean significantly differs from the others based on the ratio of variance between group means to variance within groups (Lury & Fisher, 1972; Ziegel et al., 1992).

4.1 Socio-demographic factors

Overall, 180 (60.6%) and 117 (39.4%) of our participants are male and female respectively. In addition, 75 (25.3%) of our participants are above 45 years old, 128 (43.1%) between 30 to 45 years old, and 94 (31.6%), below 30 years old. In addition, 76 (25.59%) participants indicate that they have at least a postgraduate degree or equivalent, 163 (54.88%) a college degree or equivalent, and 55 (18.52%) a high school diploma or equivalent, while three (1.01%) participants selected 'other' as their highest education qualification. Finally, 124 (41.8%), 94 (31.6%), and 21 (7.07%) participants indicate that they are based in North America, Europe, and the Asia-Pacific respectively, while 58 (19.5%) of participants selected 'other' as their geographic location.

4.2 Occupational-demographic factors

Table 1 presents the industry to which participants belong, Table 2 presents the job-roles that they hold within their organisations, and Table 3 presents the size of the organisations that they work in. The top six industries to which participants belong are accounting/audit services (12.12%), banking/finance/insurance (21.89%), other professional services (10.8%), technology, telecommunication and media (12.8%), retail (9.76%), and other (14.8%). Together, these six industries account for about 82.17% of our survey participants' responses. The remaining five industries each account for less than 18% of our survey participants' responses. The top four job roles that participants hold are CEO/deputy CEO/president/vice-president (8.42%), manager (39.1%), assistant manager (10.8%), and other (17.5%). Together, these four job roles account for about 75.82% of our participants' responses. The remaining five job roles each account for less than 25%. About 48.5% of participants work for small- and medium-sized organisations that employ fewer than 200 workers, and 28.6% of participants work for large organisations that employ between 200 and 4,999 workers. Together, these two organisation types account for about 77.1% of our survey participants. Finally, we find that 126 (42.4%) have over 15 years of work experience, 114 (38.4%) between five and 15 years, and 57 (19.2%) fewer than five

years. Further, 40 (13.5%) have above 15 years of work experience in accounting, 94 (31.6%) between five and 15 years, and 163 (54.9%) fewer than five years of work.

Table 1: Frequency and percentage of participants by industry

Job role	Frequency	Percentage
Accounting/audit services	36	12.1
Banking/finance/insurance	65	21.9
Other professional services	32	10.8
Energy and utilities	3	1.01
Healthcare institutions	13	4.38
Hotels and hospitality	11	3.70
Logistics and supply chain	9	3.03
Manufacturing	17	5.72
Retail	29	9.76
Technology, telecommunications and media	38	12.8
Other	44	14.8

Table 2: Frequency and percentage of participants by job role

Job role	Frequency	Percentage
CEO/deputy CEO/president/vice-president	25	8.42
Director/executive director	16	5.39
General manager	16	5.39
Associate director/senior manager	13	4.38
Manager	116	39.1
Assistant manager	32	10.8
Officer	15	5.05
Executive	12	4.04
Other	52	17.5
Technology, telecommunications and media	38	12.8
Other	44	14.8

Table 3: Frequency and percentage of participants by organisation size

Job Role	Frequency	Percentage
20,000 or more employees (global)	32	10.8
5,000 to 19,999 employees (very large)	36	12.1
200 to 4,999 employees (large)	85	28.6
Less than 200 employees (small and medium)	144	48.5

4.3 Factor analysis

We first conducted factor analysis to examine key themes associated with participants' responses. Specifically, principal axis factoring with varimax rotation was used for exploratory factor analysis. Using the Kaiser criterion (Kaiser, 1958; 1960), which indicates that factors with eigenvalues less than 1.0 should be discarded as they are considered to explain less variance than a single variable, we identified five factors which cumulatively explain 64.1% of the total variance in participants' responses. Table 4 presents the factor loadings for the five factors and the variance explained by each factor.

Table 4: Sum of squared (SS) loadings and variance explained by factors (5 factors)

	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**
SS loadings	5.295	4.227	3.040	2.617	2.133
Proportion of variance explained by each factor	0.196	0.157	0.113	0.097	0.079
Cumulative proportion of variance explained by factors	0.196	0.353	0.465	0.562	0.641

Note: Factor 1 = *knowledge_and_skills*, participants' perceptions of their digital knowledge and technical skills; Factor 2 = *barriers*, participants' perceptions of barriers preventing organisational digital transformation; Factor 3 = *empowerment*, participants' perceptions of being empowered digitally by senior management; Factor 4 = *job_execution*, participants' perceptions of their abilities with respect to job execution during digital strategy implementation; Factor 5 = *organisational_strategy*, participants' perceptions of broader organisational digital strategy

Table 5 displays the individual factor loadings for each survey question based on their respective associated factors. Reliability analysis conducted on these five factors reveals high Cronbach's alpha values: 0.91 (*knowledge_and_skills*), 0.88 (*barriers*), 0.94 (*empowerment*), 0.83 (*job_execution*), and 0.92 (*organisational_strategy*). This suggests that our five factors measure our underlying constructs with a high degree of consistency. Factor 1 accounts for 19.6% of the variance in participants' ratings and relates to their perceptions of their digital knowledge and technical skills. It contains questions asking respondents to rate their digital knowledge in: digital business models (factor loading = 0.654), artificial intelligence and machine learning (0.744), blockchain and distributed ledger technology (0.771), using digital tools to collaborate with others (0.525), protecting devices and digital contents, and understanding the risks and

dangers (0.510), and programming/coding in different programming languages (0.637), as well as their digital involvement in discussing digital transformation topics (0.674), often working on digital transformation projects (0.692), and whether they intensively observe the developments of digital transformation (0.731). Accordingly, we computed the mean of participants' ratings of the questions contained in factor 1 as a composite measure of their perceptions of their digital knowledge and technical skills (*knowledge_and_skills*).

Factor 2 explains 15.7% of the variance in participants' ratings and relates to their perceptions of barriers preventing organisational digital transformation. It contains questions highlighting the following barriers: missing innovation culture (factor loading = 0.710), budget restrictions (0.592), focus on daily business (0.588), legal boundaries (0.370), missing leadership buy-in (0.761), missing technological skills (0.782), missing clarity about areas of innovation (0.860), and lack of urgency (0.734). Accordingly, we computed the mean of participants' ratings of the questions contained in factor 2 as a composite measure of their perceptions of barriers preventing organisational digital transformation (*barriers*).

Factor 3 accounts for 11.3% of the variance in participants' ratings and relates to their perceptions of being empowered digitally by senior management. It contains questions pertaining to the extent to which the senior management of the respondents' organisation focus on: encouraging all employees to embrace digital transformation (0.832), promoting digital transformation (0.867), and providing employees with resources to derive benefits from digital transformation (0.650). The mean of participants' ratings of the questions contained in factor 3 were computed as a composite measure of their perceptions of being empowered digitally by senior management (*empowerment*).

Factor 4 explains 9.7% of the variance in participants' ratings and relates to their perceptions of their abilities with respect to job execution during digital strategy implementation. It contains questions where respondents rate their ability to execute required job tasks (factor loading = 0.868), meet new job requirements (0.822), and also their perception of the extent of digital strategy implementation in their organisation's industry sector as favourable (0.450). We computed the mean of participants' ratings of the questions contained in factor 4 as a composite measure of their perceptions of their abilities with respect to job execution during digital strategy implementation (*job_execution*).

Factor 5 explains 7.9% of the variance in participants' ratings and

relates to their perceptions of broader organisational digital strategy. It contains questions alluding to the readiness and responsiveness of organisations, with respect to: appropriate organisational structure (factor loading = 0.535), digitally enabled and experienced managers (0.653), fast reaction to digital trends (0.631), and the organisation's overall responsiveness (0.557). We computed the mean of participants' ratings of the questions contained in factor 5 as a composite measure of their perceptions of broader organisational digital strategy (*organisational_strategy*).[2]

Finally, as an overall measure of participants' perceptions of their digital readiness (*overall_readiness*), we summed the factor scores across *knowledge_and_skills*, *barriers*, *empowerment*, *job_execution*, and *organisational_strategy*. This compiled an overall score reflecting participants' combined perceptions across the five core aspects of digital readiness identified by the factor analysis, where a higher score would indicate a greater overall perception of one's digital readiness.

Table 5: Factor loadings from principal axis factoring with varimax rotation (5 factors)

	Factor				
Survey Question	**1**	**2**	**3**	**4**	**5**
6. Rate your digital knowledge in: Blockchain and distributed ledger technology	**0.771**				0.150
5. Rate your digital knowledge in: Artificial intelligence and machine learning	**0.744**		0.158	0.208	
15. Rate the following aspects of your digital involvement: I observe the developments of the digital transformation intensively.	**0.731**	-0.101	0.301	0.102	0.221
14. Rate the following aspects of your digital involvement: I work often and a lot on digital transformation projects.	**0.692**	-0.102	0.294	0.135	0.290
13. Rate the following aspects of your digital involvement: I like to discuss digital transformation topics.	**0.674**		0.272	0.244	0.157
4. Rate your digital knowledge in: Digital business models	**0.654**	-0.110	0.212	0.395	

Survey Question	1	2	3	4	5
9. Rate your digital knowledge in: Programming/coding in different programming languages	**0.637**		0.121		0.147
7. Rate your digital knowledge in: Using digital tools to collaborate with others	**0.525**	-0.146	0.246	0.425	
8. Rate your digital knowledge in: Protecting devices and digital contents, and understanding the risks and dangers	**0.510**	-0.156	0.163	0.348	0.136
25. Rate the extent to which the following barrier prevents your organisation from the realisation of digital projects: Missing clarity about areas of innovation		**0.860**			-0.168
24. Rate the extent to which the following barrier prevents your organisation from the realisation of digital projects: Missing technological skills	-0.102	**0.782**			-0.186
23. Rate the extent to which the following barrier prevents your organisation from the realisation of digital projects: Missing leadership buy-in		**0.761**		-0.118	
26. Rate the extent to which the following barrier prevents your organisation from the realisation of digital projects: Lack of urgency	-0.139	**0.734**	-0.168		-0.111
19. Rate the extent to which the following barrier prevents your organisation from the realisation of digital projects: Missing innovation culture		**0.710**	-0.152		-0.172
20. Rate the extent to which the following barrier prevents your organisation from the realisation of digital projects: Budget restrictions		**0.592**			
21. Rate the extent to which the following barrier prevents your organisation from the realisation of digital projects: Focus mainly on daily business	-0.169	**0.588**			
22. Rate the extent to which the following barrier prevents your organisation from the realisation of digital projects: Legal boundaries	0.143	**0.370**		-0.142	0.281
11. Rate the extent to which senior management in your organisation focuses on: Promote digital transformation	0.349	-0.106	**0.867**	0.172	0.167

Survey Question	1	2	3	4	5
10. Rate the extent to which senior management in your organisation focuses on: Encourage all employees to embrace digital transformation	0.315	-0.138	**0.832**	0.207	0.191
12. Rate the extent to which senior management in your organisation focuses on: Provide employees with all resources to be able to derive best benefit from the digital transformation	0.387	-0.154	**0.650**	0.148	0.349
1. Job tasks during digital strategy implementation: I am able to execute required job tasks.	0.211	-0.110	0.127	**0.868**	
2. Job requirements during digital strategy implementation: I can meet all new requirements easily.	0.266		0.143	**0.822**	0.114
3. I consider the extent of implementation of digital strategy in my industry sector as good.	0.297	-0.174	0.356	**0.450**	0.293
17. Rate your organisation's digital readiness in: It has enough digitally enabled and experienced managers	0.392	-0.229	0.310	0.241	**0.653**
18. Rate your organisation's digital readiness in: It is willing to react to digital trends fast and in an appropriate manner	0.404	-0.250	0.433	0.230	**0.631**
27. Rate the following aspect of your organisation's response capacity: I consider my organisation as fast reacting	0.452	-0.280	0.321	0.112	**0.557**
16. Rate your organisation's digital readiness in: It has an appropriate organisational structure	0.358	-0.186	0.365	0.315	**0.535**

Note: Factor 1 = *knowledge_and_skills*, participants' perceptions of their digital knowledge and technical skills; Factor 2 = *barriers*, participants' perceptions of barriers preventing organisational digital transformation; Factor 3 = *empowerment*, participants' perceptions of being empowered digitally by senior management; Factor 4 = *job_execution*, participants' perceptions of their abilities with respect to job execution during digital strategy implementation; Factor 5 = *organisational_strategy*, participants' perceptions of broader organisational digital strategy.

4.4 Main results

Table 6 presents simple effects tests relating to our research question, which examines how gender influences accounting and finance professionals' perceptions of digital readiness. For men, we find that

overall_readiness (male mean = -0.37, t = -2.00, p = 0.04), *empowerment* (male mean = -0.21, t = -2.64, p < 0.01), and *job_execution* (male mean = -0.16, t = -1.94, p = 0.05) are significantly smaller than zero, which represents the mid-point of our ratings scale. This suggest that men hold relatively negative perceptions of their overall digital readiness, being empowered digitally by senior management, and abilities with respect to job execution during digital strategy implementation. For women, we find that *overall_readiness* (female mean = 0.56, t = 3.00, p < 0.01), *empowerment* (female mean = 0.32, t = 4.47, p < 0.01), and *job_execution* (female mean = 0.25, t = 3.81, p < 0.01) are significantly greater than zero, suggesting that women hold relatively positive perceptions of their overall digital readiness, being empowered digitally by senior management, and abilities with respect to job execution during digital strategy implementation. *Knowledge_and_skills* (male mean = 0.07, t = 0.96, p = 0.34; female mean = -0.10, t = -1.03, p = 0.31), *barriers* (male mean = -0.0002, t = -0.003, p = 0.997; female mean = 0.0004, t = 0.004, p = 0.997), and *organisational_strategy* (male mean = -0.06, t = -0.78, p = 0.44; female mean = 0.09, t = 1.10, p = 0.28) are not significantly different from zero for both men and women, suggesting that both genders hold neutral perceptions about these aspects of digital transformation.

Overall, we find that *overall_readiness* is significantly greater for women (mean = 0.56) than men (mean = -0.37, t = 3.75. p < 0.01). This indicates that there is a gender difference in perceptions of overall digital readiness during digital transformation in accounting functions. In addition, out of the five factors, we find that *empowerment* is significantly greater for women (mean = 0.32) than men (mean = -0.21, t = 4.96. p < 0.01), indicating that women perceive being empowered digitally by senior management to a greater extent than men. Similarly, we find that *job_execution* is significantly greater for women (mean = 0.25) than men (mean = -0.16, t = 3.88, p < 0.01), suggesting that women perceive that they are better able to continue with their job execution while their company is implementing its digital strategy than men.

On the other hand, we find that *knowledge_and_skills* is no different for men (mean = 0.07) than women (mean = -0.10, t = -1.39, p = 0.17), suggesting that gender does not influence accounting and finance professionals' perceptions of the extent to which they possess greater digital knowledge and technical skills. We find that barriers is no different for men (mean = -0.0002) and women (mean = 0.0004, t = 0.005, p = 1.00), which suggests that there is no difference between men and women in their perceptions of how *barriers* prevent

their companies from the realisation of digital projects. Finally, *organisational_strategy* is no different for men (mean = -0.06) and women (mean = 0.09, t = 1.34, p = 0.18), which suggests that there is no difference between men and women in their perceptions of their organisation's digital strategy.

Table 6: Mean (standard deviation) of corresponding factor topic associated with survey questions by gender

	Female (1)	Male (2)	t-stat	p-value
Mean (Factor 1)	-0.1034	0.0672	-1.3932	0.165
knowledge_and_skills	(1.090)	(0.935)		
Mean (Factor 2)	0.0004	-0.0002	0.0050	0.9960
barriers	(1.060)	(0.959)		
Mean (Factor 3)	0.3234	-0.2102**	4.9553	0.00
empowerment	(0.783)	(1.070)		
Mean (Factor 4)	0.2499	-0.1625**	3.8779	0.0001
job_execution	(0.71)	(1.120)		
Mean (Factor 5)	0.0937	-0.0609	1.3367	0.1824
organisational_strategy	(0.925)	(1.040)		
Overall_readiness	0.5640	-0.367**	3.7482	0.0002
	(1.890)	(2.370)		

Note: ** Indicates that differences in mean values reported in (1) and (2) are significant at 5% level. Factor 1 = *knowledge_and_skills*, participants' perceptions of their digital knowledge and technical skills; Factor 2 = *barriers*, participants' perceptions of barriers preventing organisational digital transformation; Factor 3 = *empowerment*, participants' perceptions of being empowered digitally by senior management; Factor 4 = *job_execution*, participants' perceptions of their abilities with respect to job execution during digital strategy implementation; Factor 5 = *organisational_strategy*, participants' perceptions of broader organisational digital strategy

In examining the effects of other socio-demographic factors on participants' perceptions of digital readiness, we find that *knowledge_and_skills* is significantly greater (mean = 0.20) for participants below 30 years old than for participants aged between 30 and 45 years (mean = -0.09, t = -2.18, p = 0.03) and for participants aged above 45 years old (mean = -0.10, t = -2.07, p = 0.04); *empowerment* is also significantly greater (mean = 0.20) for participants aged above 45 years than for participants aged between 30 and 45 years (mean = -0.15, t = 2.63, p < 0.01). All other differences in participants' ratings of each of the five factors across age groups are not significant (all t < 2.0, all p > 0.05). We also find that *knowledge_and_skills* is significantly

greater for participants who indicated that they were based in an 'other' location (mean = 0.31) than for participants who were based in Asia-Pacific (mean = -0.49, t = -2.53, p = 0.02) and those based in North America (mean = -0.09, t = -2.59, p = 0.01); *job_execution* is also significantly greater for participants who indicated that they were based in an 'other' location (mean = 0.14) than for participants based in Europe (mean = -0.17, t = -2.10, p = 0.04); *organisational_strategy* is also significantly greater for participants who indicated that they were based in an 'other' location (mean = 0.24) than for participants who were based in Europe (mean = -0.15, t = -2.72, $p < 0.01$). All other differences in participants' ratings of each of the five factors across geographic location are not significant (all $t < 2.0$, all $p > 0.05$).

To examine the effects of occupational-demographic factors, we conducted one-way ANOVA tests (see Table 7) with occupational-demographic factors as independent variables (i.e. industry, job role, and organisation size) and the five factors associated with digital readiness as dependent variables. We find a significant main effect when *knowledge_and_skill* is used as the dependent variable and industry is used as the independent variable ($F = 2.87$, $p < 0.01$). The main effects in all other ANOVA tests are not significant (all $p > 0.05$). The significant main effect of industry on *knowledge_and_skill* suggests that participants' industry influences their perceptions of their digital knowledge and technical skills. However, given our study's focus on gender effects, we leave the examination of industry effects to future research. Given the relatively small industry sample sizes in our data (that are fewer than 30 participants in six out of 11 industry categories), we anticipate that statistical tests in our study involving industry categories will lack power.

Table 7: Results of one-way ANOVA for variation in factor scores by demographic variables

Factor	Demographic variable	F-stat	p-value
Factor 1	Industry	2.873	0.002**
knowledge_and_skills	Company size	1.144	0.331
	Position	1.830	0.071
Factor 2	Industry	0.940	0.497
barriers	Company size	2.323	0.075
	Position	1.171	0.316
Factor 3	Industry	1.076	0.380
empowerment	Company size	0.540	0.655
	Position	0.588	0.788

Factor	Demographic variable	F-stat	p-value
Factor 4	Industry	1.253	0.257
job_execution	Company size	0.778	0.507
	Position	1.329	0.229
Factor 5	Industry	1.109	0.355
organisational_strategy	Company size	2.200	0.088
	Position	1.320	0.233

5. Discussion

This study provides insights into gender differences in digital readiness among accounting professionals, with important implications for theory, practice, and future research. This section examines our findings in relation to existing literature, explores their practical applicability, and considers future research directions. The findings corroborate and enhance prior research about gender differences in digital readiness and technology adoption. The higher levels of perceived empowerment and job execution readiness among female accountants correspond with Segovia-Pérez et al. (2019), who find that female managers are typically more receptive to technological change in professional settings. This is also consistent with Lino et al. (2021), who address the changing role of accountants in a digital environment and show that gender dynamics are shifting favourably for female professionals.

However, our results contradict Venkatesh et al. (2003), who suggest that women experience greater anxiety when using IT. This disparity suggests a likely change in gender-related technology perspectives and reflects shifting gender dynamics in the accounting profession throughout the past two decades. Our results support the notion that perceptions of digital readiness are becoming more egalitarian, in particular with Generation Z individuals (Awang et al., 2021). One interesting finding is that perceived knowledge and skills do not significantly vary depending on gender. While other studies indicate that men report better technology self-efficacy (Cai et al., 2017; Li et al., 2017), our results suggest that, in the accounting field, men and women view themselves to be equally confident in their digital expertise. As highlighted by Yigitbasioglu et al. (2022), this emphasises the need of looking at views regarding technology inside certain professional sectors instead than generalising across disciplines.

This study contributes to the theoretical framework around gender differences in digital readiness, particularly in the accounting profession. The finding that female accountants show a higher

degree of perceived empowerment and job execution readiness corresponds with and expands the work of Gfrerer et al. (2020), who find that perceptions of digital readiness vary between managers and employees. The implication is that gender dynamics shapes how digital readiness is perceived and how technology is implemented in professional settings. Moreover, our findings refute the traditional stereotype of women's anxiety towards IT use. This points to a change in gender-related technological viewpoints and warrants further research. This paper contributes to the increasing corpus of research stressing the importance of a sophisticated knowledge of gender in the framework of digital transformation.

In terms of practical implications, accounting firms and practitioners can use these findings as the basis for creating supportive environments that foster digital readiness among all employees. Organisations can develop training courses tailored to the demands of their workforce in acknowledgment of the finding that both male and female accountants view their digital abilities similarly. This would help to ensure that every employee feels enabled to interact with digital technologies. Future research should look into how such initiatives affect long-term results on firms' digital transformation and explore how gender dynamics change as the accounting profession continues to adjust to technological advancements. This is consistent with the call for more detailed research on how gender impacts the acceptance and use of digital technologies by Awang et al. (2021).

6. Conclusion

Digital technologies are transforming and expected to continue transforming the accounting function in significant ways, with increased automation, artificial intelligence, and data analytics bringing greater emphasis on advisory roles over compliance (Yigitbasioglu et al., 2023). Accounting professionals are expected to adapt and adopt the changes caused by the digital transformation but are faced with various implementation challenges (Gonçalves et al., 2022). A lack of digital readiness has been identified as a fundamental barrier to successful digital transformation initiatives (Afroze & Aulad, 2020; Holmström, 2022). Digital readiness refers to the level of behavioural competencies, cognitive skills and digital proficiency of an organisation's employee that help them to manage the digital transformation process (Nguyen et al., 2019). Different genders may have divergent perspectives concerning opportunities and risks posed by digital transformation (Awang et al., 2022). However, gender

has received little attention in digital transformation in accounting literature. Acknowledging gender differences in digital readiness is important since these differences can affect how successfully accountants adjust to advances in technology. By pointing out the need for a deeper understanding of how gender affects perceptions and readiness in the accounting profession, this study addresses this gap in accounting literature on gender dynamics and digital transformation

This study contributes to the extant accounting literature by addressing the current knowledge gap on gender differences in readiness towards digital transformation among accountants. This study answers the calls in prior studies to examine the effect of gender diversity on the usage of digital technologies. This study also contributes to practice by understanding the gender diversity effect. A better understanding of gender differences may help organisations improve talent and team management during digital transformation projects. This study finds that female accountants challenge traditional stereotypes about women's technological capacity by showing more reported empowerment and job execution readiness. Moreover, the results highlight the need to value the unique contributions of both genders for digital transformation projects.

The survey conducted in this study involved 310 participants recruited from the Prolific platform. Participants were tasked to provide ratings for 27 questions relating to their perceptions of digital readiness. After eliminating incomplete responses and participants who selected 'other' as their gender, we ended with 297 participants. A total of 180 (60.6%) and 117 (39.4%) of our participants are male and female respectively. The results indicate five perceptions of digital readiness: participants' perceptions of their digital knowledge and technical skills (*knowledge_and_skills*), barriers preventing organisational digital transformation (*barriers*), being empowered digitally by senior management (*empowerment*), their abilities with respect to job execution during digital strategy implementation (*job_execution*), and broader organisational digital strategy (*organisational_strategy*).

Overall, the findings indicate that there is a gender difference in digital readiness during digital transformation in accounting functions. Women have a greater perception of digital readiness compared to men. This shows that it is incorrect to argue that women are less willing to adopt technologies. The findings also show that women may cope better with changes and take a more proactive approach towards changes compared with the men. Management should recognise that women can play an important and potentially

bigger role in digital transformation projects, and avoid gender bias in talent and team management. Specifically, out of the five perceptions, two (*empowerment and job_execution*) are significantly greater for women than men. Women have a greater perception of being empowered digitally by senior management to a greater extent than men. Women also have a greater perception that they are better able to continue with their job execution while their company is implementing its digital strategy. For the other three perceptions (*knowledge_and_skills, barriers, and organisational_strategy*), the results show that there are no differences between men and women in their perceptions of digital knowledge and technical skills, barriers preventing organisational digital transformation, and broader organisational digital strategy. These findings coincide with a recent study by Segovia-Pérez et al. (2019), which indicates increasing receptiveness of female managers to technology changes. However, they run counter to Venkatesh et al. (2003), who find that there was greater technology anxiety among women. This disparity could point to changing gender dynamics in the accounting profession within the last 20 years.

Regarding limitations of this study, this study focuses on digital transformation in the context of the accounting function. The findings may not be generalised to other functions within the organisation. Participants were also asked to self-rate their perceptions of digital readiness, which may not be an accurate representation of their actual digital readiness. As such, future studies could consider measuring participants' actual digital readiness, and extending the study to outside the accounting profession, for instance, law and finance. Future research may also consider adopting the case study methodology to examine digital transformation projects in greater detail. Finally, because our survey does not explore the drivers of differences in perceptions of digital readiness in men versus women, future research can examine potential drivers of these differences, which would be insightful to both managers and executives.

Endnotes

[1] Gfrerer et al. (2021) developed their survey questions to measure managers' and employees' perceptions of digital readiness based on aspects relating to both individual difference and structural factors. Because the present study also seeks to examine perceptions of digital readiness, albeit for accounting and finance executives, we expect that these questions will

allow us to obtain an appropriate measure of this construct. Our findings will complement the findings of Gfrerer et al. (2021), we extend their findings by examining the perceptions of digital readiness of men versus women in the accounting and finance sector.

[2] Our five exploratory factors map closely with Gfrerer et al.'s (2021) four factors: *knowledge_and_skills* with individual competencies, *empowerment* with shared beliefs, *job_execution* with individual beliefs, while *barriers* and *organisational strategy* collectively mapped with organisational capabilities.

Appendix

A1. Survey instrument

Digital readiness

Digital readiness is defined as the employees' readiness level in an organisation, undergoing a technology transformation or going digital. Digital readiness refers to the level of behavioural competencies, cognitive skills and digital proficiency of an organisation's employees that helps them to adapt and manage the digital transformation process. It indicates whether the employees possess the necessary skills to use information technology, proper behavioural tendencies and cognitive abilities to manage the transformation effectively.

Digital readiness – Individual

Rate the following aspects of your digital readiness:

1. Job tasks during digital strategy implementation: I am able to execute required job tasks.
2. Job requirements during digital strategy implementation: I can meet all new requirements easily.
3. I consider the extent of implementation of digital strategy in my industry sector as good.

Rate your digital knowledge in the following areas:

4. Digital business models
5. Artificial intelligence and machine learning
6. Blockchain and distributed ledger technology
7. Using digital tools to collaborate with others
8. Protecting devices and digital contents, and understanding the risks and dangers

9. Programming/coding in different programming languages

Perceived digital empowerment

Rate the extent to which senior management in your organisation focuses on the following:

10. Encourage all employees to embrace digital transformation
11. Promote digital transformation
12. Provide employees with all resources to be able to derive best benefit from the digital transformation

Perceived digital involvement

Rate the following aspects of your digital involvement:

13. I like to discuss digital transformation topics.
14. I work often and a lot on digital transformation projects.
15. I observe the developments of the digital transformation intensively.

Digital Readiness – Organisational Capabilities

Rate your organisation's digital readiness in the following aspects:

16. It has an appropriate organisational structure
17. It has enough digitally enabled and experienced managers
18. It is willing to react to digital trends fast and in an appropriate manner

Rate the extent to which the following are barriers that prevent your organisation from the realisation of digital projects:

19. Missing innovation culture
20. Budget restrictions
21. Focus mainly on daily business
22. Legal boundaries
23. Missing leadership buy-in
24. Missing technological skills
25. Missing clarity about areas of innovation
26. Lack of urgency

Organisational response capacity

Rate the following aspect of your organisation's response capacity:

27. I consider my organisation as fast reacting

[*Note: Ratings for questions 1 to 27 to be made on fifteen-point scales with zero as the mid-point and -7 (+7) corresponding to negative (positive) ratings of each aspect of digital readiness.*]

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