



# Gender and digitisation within an innovative mobile technology organisation in Johannesburg

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## Abstract

Digitisation plays a crucial role in empowering women economically. However, digitisation is not neutral to gender, as social norms and stereotypes hinder women from fully benefiting from digital technologies. Therefore, this study examines the impact of gender categories on digitisation within a mobile technology organisation in Johannesburg. To achieve this, the study employed a post-positivist view and a quantitative method. A simple random sampling technique was used to select a sample of 50 employees. Data was collected through a structured questionnaire and analysed using the Statistical Package for the Social Sciences (SPSS) version 27.0. The findings of the study indicated that there was a statistically significant difference in digitisation experiences between gender categories within the organisation. However, the practical significance of this difference was found to be small. It was therefore recommended that organisations strive for gender equality and inclusivity in its digitisation process. This can be achieved by providing equal opportunities to both male and female employees to participate in digital initiatives. Additionally, they should consider implementing targeted training programs to enhance the digital skills of employees, regardless of their gender. This can help bridge the gaps by ensuring that employees are equipped to contribute to the organisation's digitisation efforts.

**Keywords:** First Keyword; Second Keyword; Third Keyword; Forth Keyword; Fifth Keyword

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## 1. Introduction

The information and communication technologies (ICT) sector within the STEM field offers a wide range of job opportunities on a global scale, contributing to economic empowerment for those who possess the necessary skills. According to Hino and Cunha (2019), individuals who are proficient in ICT have the chance to secure well-paying jobs and advance their careers in a rapidly evolving industry. In the era of the Fourth Industrial Revolution, the utilisation of technology and innovation was crucial in driving economic transformation and sustainable development. As economies undergo rapid structural changes in the digital age, it becomes imperative to prioritise gender equality as a means to mitigate social disparities (United Nations, 2021). Likewise, Kraugusteeliana et al. (2022) and Touriano et al. (2023), posit that in the modern era, ICT significantly influences global economic and social development. Kraugusteeliana (2023) adds the rapid expansion of the ICT sector has notably heightened the need for a skilled workforce, shaping various aspects of society and economy.

ICTs is a broader term, which refers to all communication technologies, including the internet, wireless networks, cell phones, computers, software, middleware, videoconferencing, social networking, and other media applications and services enabling users to access, retrieve, store, transmit, and manipulate information in a digital form. In short, it refers to the technologies and tools used to manage and communicate information (Food and Agriculture Organisation of the United States, 2024). ICT enables and facilitates digitisation through the use of ICT tools such as computers, software, networks, organisations and individuals. Additionally, the integration of ICT tools into various sectors has not only streamlined operations but also fostered innovation, creating new avenues for economic growth and social progress. This ongoing digital transformation underscores the importance of equipping the workforce with relevant skills to harness the full potential of ICT. As industries continue to digitize, the demand for ICT proficiency is expected to rise, further solidifying its role in shaping the future of work and global development.

Digitisation is the process of converting analogue information into digital form. Scheele and Spangenberg (2021) comment that it involves modifying the environment to suit computers, which are devices designed to perform calculations and handle information. This transformation allows information to be converted into data that can be processed by computers efficiently (Scheele and Spangenberg, 2021). Živković et al. (2024) observe that in a period marked by swift technological progress and unparalleled digitisation, businesses must swiftly adjust to stay competitive and ensure their expansion. Wajcman and Young (2023) assert that the rise of digitisation offers significant opportunities to enhance social and economic development worldwide, leading to increased productivity and improved well-being for populations. Despite efforts to promote women's empowerment and gender equality through various research projects, interventions, and policies, a notable digital gender gap persists, hindering the fair distribution of digitisation benefits (Wajcman and Young, 2023). Furthermore, Živković et al. (2024) note that gender diversity is acknowledged as a key element that promotes creativity and enables effective digitisation initiatives in organisations. Scheele and Spangenberg (2021) state that the advent of digitisation provides a unique opportunity to bring to light existing gender dynamics, challenge traditional gender roles, and redefine power dynamics.

The impact of technological advancements on gender equality is heavily influenced by the specific conditions of digitisation and the way transformation processes are designed (Scheele and Spangenberg, 2021). Consequently, organizations must not only embrace digitization for its operational benefits but also actively

work towards inclusive digital practices that consider gender dynamics. This approach will ensure that the transformative power of digitization is leveraged equitably, providing opportunities for all individuals regardless of gender. As digitization continues to reshape industries, it is essential to address the structural inequalities that could otherwise hinder its potential to drive comprehensive social and economic progress.

## 2. Problem statement

Digitisation plays a crucial role in empowering women economically (United Nations, 2021). However, digitisation is not impartial to gender, as social norms and stereotypes hinder women and girls from fully benefiting from digital technologies (United Nations Development Programme (UNDP), 2021). Llorens et al. (2021) underscore this view and state that one issue that has consistently graced the Information Technology (IT) industry landscape is gender inequality, which remains in the spotlight. Despite increasing attention to gender equality, the reality is that the gender gap in the IT industry remains a deep-seated problem (Llorens et al., 2021). The current lack of representation of women in the technology sector perpetuates social disparities (United Nations, 2021). Furthermore, Boudreau and Kaushik (2020) comment that there is a noticeable gap in scholarly literature focusing on gender disparities within the technology sector, despite its significant economic impact and widespread media coverage of gender issues in technology. Failure to address these issues may lead to further marginalisation of women in the fast-paced digital revolution, impacting various aspects (United Nations, 2021). Therefore, this study aims to investigate the relationship between gender categories and digitisation within an innovative mobile technology organisation located in Johannesburg. Moreover, it seeks to understand how males and females perceive digitisation and the adoption of new technologies within the organisation.

## 3. Significance of the study

Menyah (2023) posits that the utilisation of digitisation has the potential to promote gender equality and sustainable development through improved accessibility to education, healthcare, and economic opportunities, particularly for women and marginalised communities. Simultaneously, gender equality plays a crucial role in maximising the benefits of digitisation and attaining environmentally friendly and inclusive economic progress (Menyah, 2023). Thus, the study on gender categories and their impact on digitisation within an innovative mobile technology organisation in Johannesburg holds great significance in understanding the role of gender in the digitisation of organisations. By examining the categories between genders within the context of a mobile technology organisation, this study can shed light on the barriers and opportunities faced by women in the industry. It can provide valuable insights into the gendered experiences, challenges, and contributions in the digitisation process, ultimately helping organisations create more inclusive and equitable environments.

Furthermore, aligning with the specific Sustainable Development Goals (SDGs) of the United Nations, this study directly relates to several goals. Firstly, it contributes to SDG 5: Gender Equality, by exploring the gender categories within the mobile technology industry and identifying potential areas for improvement in terms of equal opportunities and representation. SDG 5 strives to attain gender parity and empower women and girls across various domains (United Nations, 2021). It is also one of the priority areas for action by ESCAP and UN Women is identified as such. Additionally, it is a crucial element of target 5.5 of SDG 5, which aims to ensure

women's complete and effective participation, as well as equal opportunities for leadership, in all levels of decision-making in political, economic, and public life. (United Nations, 2021). The economic empowerment of women plays a pivotal role in the advancement of SDG 5, which focuses on achieving gender equality. Secondly, it aligns with SDG 9: Industry, Innovation, and Infrastructure, as it focuses on the digitisation process within an innovative mobile technology organisation. By understanding the impact of gender categories on digitisation, this study can contribute to creating more inclusive and sustainable digital infrastructures. Lastly, it also relates to SDG 10: Reduced Inequalities, as it aims to uncover any gender-based inequalities and provide recommendations for promoting gender equality within the organisation and the broader industry.

## 4. Literature review

### 4.1. The concept of digitisation

Digitisation is a fundamental aspect of contemporary societies and serves as a practical means to attain sustainable development (UNDP, 2021). The availability of digital tools and technologies not only facilitates social engagement but also plays a crucial role in shaping the future of work and overall development (UNDP, 2021). The widespread adoption and expansion of digital technologies have profoundly impacted various facets of socio-political and economic spheres, encompassing governance systems, communication methods, and patterns of production and consumption (Wajcman and Young, 2023). The authors comment that the transition from analogue to digital technologies, known as digitisation, is defined by advancements such as smartphones, mobile internet, social media, Internet of Things, artificial intelligence, big data, cloud computing, and robotics. For Menyah (2023:40), it is “the process of converting analogue information into digital formats and incorporating digital technology into other fields. With the advent of digitisation, there have been changes in how individuals work, interact, and get information”.

### 4.2. Gender gap in the technology industry

The relationship between technology and innovation is crucial due to their significant influence on the economy and their ability to enhance communication, financial services, and business support (United Nations, 2021). Technology plays a key role in fostering inclusive, innovative, and dynamic cultures that allow all individuals to participate in and benefit from the advancement of contemporary societies (United Nations, 2021). However, Wajcman and Young (2023) observe that while digitisation offers the potential for increased equality, it also presents the danger of perpetuating and reinforcing gender disparities. This viewpoint is especially crucial in an era where digital technologies are being promoted as the ultimate remedy for societal issues (Wajcman and Young, 2023).

As evidenced by studies conducted by Guzman and Kacperczyk (2019), Fernandez-Mateo and Kaplan (2018), Scott and Shu (2017), and Sherf et al. (2017), extensive research on gender disparities has identified numerous factors contributing to gender gaps in various sectors of the economy. The fields of science and technology in particular are influenced by various factors that affect women's inclination and capabilities to pursue careers in these areas (United Nations, 2021). These factors include social culture, gender stereotypes, and disparities in STEM education participation (United Nations, 2021). Gender stereotypes have a significant impact on how individuals choose their careers. These stereotypes, based on established biases, often associate

men with technology-related fields, while women are encouraged to pursue caring or humanities-related occupations (Menyah, 2023). For instance, Kraugusteeliana (2023) points out that despite the growing number of women showing interest in technology and their ability to pursue higher education in this field, statistics indicate a significant disparity between the proportion of men and women actively involved in the ICT sector. Following graduation, numerous women in the technology sector encounter challenges (Women Tech Council, 2019). Research by the American Psychological Association revealed that although women made up over 20 per cent of engineering graduates in the last twenty years, almost 40 per cent of female engineering degree holders either leave the profession or do not pursue a career in the field (Women Tech Council, 2019). Additionally, Boudreau and Kaushik (2020) explain that numerous technology firms face challenges in filling their job vacancies and attaining gender equality within their workforce. One potential reason for the gender gap could be attributed to varying levels of willingness between men and women to work in competitive settings within tech organisations (Boudreau and Kaushik, 2020). As a result, these stereotypes can influence people's career aspirations and contribute to gender inequality in the digital sector (Menyah, 2023).

Cho and Lee (2015) argue that the gender disparity in the ICT industry has a significant impact on the human capital that is the foundation of the sector. This gap has far-reaching consequences that affect the entire ICT ecosystem (Cho and Lee, 2015). The European Institute for Gender Equality (EIGE) (2018) offers insights from its research on the gender divide in digitisation and reveals that the problems lie in girls' and women's self-confidence. The EIGE (2018) revealed that the vast majority of young girls and boys aged 16-24 possess the necessary skills to utilise digital technologies regularly. However, a notable contrast exists in their levels of confidence, with boys generally feeling more assured about their digital abilities than girls. This is evident in statistics showing that 73% of boys aged 15-16 feel at ease using unfamiliar digital devices, in comparison to 63% of girls within the same age group. An additional concern arises from the observation that women are less inclined towards pursuing digital jobs. This disparity in interest towards digital careers among genders poses a significant challenge in achieving gender diversity and equality in the tech industry. The EIGE (2018) found that girls with low self-confidence tend to have lower aspirations for pursuing digital jobs. These gender biases in ICT environments contribute to fewer women pursuing careers in the field, as they often face challenges in finding their place and working under female supervision (EIGE, 2018).

#### 4.3. Achieving gender equality in the technology sector through digitisation

The correlation between digitisation and gender equality is dynamic. Researchers and policymakers have shown interest in digitisation as a potential tool to enhance gender equality in labour markets (Sorgner, 2019). Živković et al. (2024) are of the view that digitisation has the potential to impact gender diversity, while gender diversity can greatly benefit digitisation. Enhancing gender parity within the technology industry via the process of digitisation is a crucial goal that requires strategic planning and implementation. Scheele and Spangenberg (2021) point out that the objective of equality is to establish a society where all individuals have equal capabilities, irrespective of gender, ensuring that opportunities and risks are evenly spread across the lifespan. Achieving equal capabilities goes beyond ensuring equal starting conditions; the objective is to address and eradicate any structural inequalities that may persist, even when the starting conditions appear to be equal (Scheele and Spangenberg, 2021). By leveraging digital tools and platforms, organisations can create more inclusive environments that empower women to thrive and succeed in the tech field. Through initiatives such as mentorship programs, skills training, and targeted recruitment efforts, organisations can



work towards closing the gender gap and fostering a more diverse and equitable workforce (Sorgner, 2019). In addition, Kubiak et al. (2023), conventional strategies for addressing diversity and stereotypes encompass training programs, implementing gender quotas, adopting the lean-in approach, and establishing equity guidelines. Živković et al. (2024) argue that gender diversity contributes to organisations by bringing in diverse perspectives, creativity, and innovation, and fostering inclusivity. The utilisation of new digital technologies can increase women's participation in the labour market and improve their financial and digital inclusion, ultimately resulting in greater economic well-being (European Commission, 2018; EIGE, 2018; OECD, 2017, 2018; Sorgner et al., 2017).

#### 4.4. Theoretical framework

Trauth (2023) explains that the theory of individual differences in gender and information technology (IDGIT) emerged to address the need for a more balanced consideration of societal and personal influences on the lack of female representation in the IT industry. The IDGIT, created by Trauth et al. (2004), provides researchers with a valuable tool to explore the unique differences among individuals of the same gender. This innovative approach takes into account a combination of personal characteristics, personal influences, and environmental influences, enabling a comprehensive investigation into the factors that contribute to individual variations within a specific gender group (Hino and Cunha, 2019). The central premise of IDGIT challenges the notion that women share the same biases and barriers uniformly. It argues that the gender gap is not solely a result of gender, but rather a combination of environmental influences, intersectional identity, and individual factors. Moreover, the initial component of this theory pertains to the distinct identity of individuals and is defined as factual information about them. This may encompass a) demographic data, which portrays individuals within specific population groups, b) lifestyle data, which describes the various aspects of individuals' lives including their past and future, and c) work environment data, which encompasses information about individuals' careers (Hino and Cunha, 2019).

Additionally, the study can be grounded on the theory of organisational culture and diversity. This theory focuses on how the culture of an organisation, including its values, norms, and practices, can either promote or hinder diversity and inclusion. Cultural diversity refers to the presence of individuals from various cultural backgrounds within a single social system (Mazur and Białostocka, 2010). The term 'culture' originates from the Latin word 'cultura' and signifies the act of cultivation (Khurana, 2015). Bertelsen (2011:10) states that diversity is "the variety of experiences and perspectives which arise from differences in race, culture, religion, mental or physical abilities, heritage, age, gender, sexual orientation, gender identity and other characteristics". Mazur and Białostocka (2010) note that organisations should prioritise diversity and strive to create inclusive environments as it can lead to increased productivity and a competitive edge. Gojinetchi (2020) posits that the presence of workplace diversity allows companies to embrace change, effectively compete in the global market, and sustain business growth. By incorporating individuals from diverse backgrounds, organisations can tap into a wealth of experiences, skills, and ideas. This amalgamation of diverse perspectives fosters inspiration, learning, and the generation of innovative ideas and advancements (Gojinetchi, 2020). By analysing how gender categories impact digitisation within the mobile technology organisation, researchers can uncover how organisational culture influences the participation and advancement of women and men in tech-related roles. Effectively managing and appreciating diversity is crucial for successful people management, ultimately enhancing workplace productivity.

## 5. Methodology

The research employed a quantitative approach and adopted a postpositivist perspective. The target population (N) for this study comprised 90 individuals who were employed at a cutting-edge mobile technology firm situated in Johannesburg. The participants encompassed both male and female employees from various departments such as human resources (HR), logistics, warehouse, marketing, operations (field service), finance, sales, information technology (IT), procurement, and technical divisions. The study encompassed a wide range of roles, including administrative clerks, data capturers, debtors and creditors clerks, field service representatives, IT technicians, planners, warehouse packers, reverse logistics clerks, call centre agents, repair technicians, back-end support personnel, GTM assistants (go-to-market), bookkeepers, payroll assistants, and managers.

The study employed a probability sampling method and more specifically a simple random sampling technique to minimise bias and ensure representativeness by accurately reflecting the larger population. This sampling technique was chosen for its fairness in selecting elements with known probabilities, reducing the chance of sampling error and allowing for generalisation of findings. The sample was selected using a lottery method. The selection of the target population was based on the criterion that employees possessed a high level of technological proficiency, were well-versed in the subject of digitisation and were highly likely to be at the forefront of leading or participating in digitisation initiatives within a mobile technology organisation. Through the utilisation of a simple random sampling technique, a sample (n) of 50 individuals was chosen to participate in the study. The decision to select a sample size of 50 out of a potential 90 participants was guided by several specific criteria. Firstly, the geographical accessibility of the sample played a crucial role in determining the final number of participants. By choosing 50 participants, the study ensured a diverse representation of employees from different departments, thus providing a more comprehensive understanding of the impact of gender categories on digitisation within the organisation. Secondly, permission granted to conduct the study by the organisation was a key factor in determining the sample size. With the approval from the organisation, the researcher was able to confidently select 50 participants, knowing that they had the necessary support and cooperation to carry out the study effectively. Additionally, the tech-savvy nature of the employees within the organisation was another criterion that influenced the choice of a sample size of 50. Given that the organisation operates in the technology industry, it was essential to select participants who were familiar with digital tools and platforms, ensuring that the data collected would be relevant and insightful in exploring the impact of gender categories on digitisation within the organisation.

## 6. Data collection and analysis

The collection of data was carried out by administering a well-structured questionnaire, and the analysis was conducted using the statistical software SPSS 27.0. In the initial phase of the survey, particular attention was given to gathering biographical information related to the respondents' age, gender, educational qualifications, and occupation. Following this section, the subsequent section of the survey was specifically designed to gain valuable insights into the concept of digitisation. Drawing inspiration from the research work conducted by Westerman et al. (2014) this study made use of their research instrument. The biographical section used multiple-choice answers with respondents having several options from which to choose. The scale contained

ten (10) items of digitisation and they were measured on a 5-point Likert scale which ranges from 1 = strongly disagree to 5 = strongly agree. Likert scales consist of a stimulus statement that people respond to by indicating how much (or little) they agree with it (Young, 2016).

## 7. Results and discussion

### 7.1. Respondents' profile

In terms of the gender distribution among the participants, it was observed that a larger proportion of the participants were female. Specifically, 56% of the participants identified as female, while the remaining 44% identified as male. This indicates a notable gender imbalance within the study sample. This skewed gender distribution may be attributed to the higher number of females, out of a total population of 90, who chose to participate in the study compared to their male counterparts.

Moving on to the age distribution of the participants, the majority, comprising 52% of the total participants, fell within the age range of 30 to 39 years. Following this, 22% of the participants were under the age of 30, indicating a significant representation of younger individuals in the study. Additionally, participants aged between 40-49 years and 50-59 years accounted for 16% and 10% of the total participants, respectively.

When considering the participants' working experience, it was found that the majority, constituting 48% of the participants, had between 11 to 15 years of working experience. This was followed by participants with 6 to 10 years of working experience, making up 28% of the sample. Furthermore, participants with less than 5 years of working experience represented 24% of the total participants, indicating a diverse range of experience levels within the study group.

Lastly, in terms of educational qualifications, participants with Matric/professional certificates formed the largest group within the study, accounting for 52% of the total participants. Following this, participants with a bachelor's degree made up 34% of the sample, while those with a diploma and a Master's degree represented 10% and 4% of the participants, respectively. This highlights the educational diversity present among the study participants.

### 7.2. Descriptive

Table 1 presents the mean values of digitisation, along with other statistical measures. The mean value represents the average score obtained from the participants' responses to the ten items of digitisation, which were measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The minimum value indicates the lowest score obtained, while the maximum value represents the highest score.

The data presented in Table 1 provides a comprehensive overview of the mean values of digitisation across various aspects of business operations. Each item in the table represents a different dimension of digitisation, ranging from customer understanding to operational efficiency and innovation. Upon analysing the data, the mean values for each item fall within a relatively narrow range. The mean values range from 2.92 to 3.74, indicating a moderate level of agreement among the respondents.

Item 1, "We use technologies such as analytics and social media, to understand our customers better", which pertains to the use of technologies such as analytics and social media to better understand customers, has a



mean value of 3.04. This suggests that, on average, the respondents agree to a moderate extent with this statement. This organisation is actively leveraging technologies such as analytics, social media, and digital channels to enhance its customer-centric strategies. The mean values indicate a moderate level of adoption and utilisation of digital tools for marketing, sales, customer service, and process automation.

**Table 1.** Mean values of digitisation

Items	N	Minimum	Maximum	Mean	Std. Deviation	Variance
1. We use technologies such as analytics and social media, to understand our customers better	50	1	5	3.04	1.309	1.713
2. We use digital channels (online, social media) to market our products	50	1	5	2.96	1.177	1.386
3. We use digital channels to sell our products & services	50	1	5	3.00	1.195	1.429
4. We use digital channels for customer service	50	1	5	3.08	.900	.810
5. We use technology to link customer-facing and operational processes	50	1	5	3.00	.700	.490
6. Our core processes are automated	50	1	5	2.92	.986	.973
7. We have an integrated view of key operational and customer information	50	1	5	3.06	.890	.792
8. We use analytics to make better operational decisions	50	1	5	3.74	1.175	1.380
9. We use digital technology to improve the performance and/or the value of our existing products and services	50	1	5	3.30	.839	.704
10. We have launched new business models based on digital technologies	50	1	5	3.34	.798	.637
Valid N (listwise)	50			3.14		

Similarly, item 2, “We use digital channels (online, social media) to market our products”, which focuses on the use of digital channels for marketing purposes, has a mean value of 2.96, indicating a slightly lower level of agreement compared to item 1. Digital channels such as online platforms and social media are utilised for marketing products. The mean value of 2.96 suggests that, on average, respondents rated their agreement with the items related to digitisation at around 3 on the Likert scale. Hence, the findings suggest a moderate level of agreement with the digitisation items among the respondents, with room for further exploration and discussion on the implications for marketing strategies in the digital age.

Considering item 3, “We use digital channels to sell our products & services”, with a mean value of 3.00, it can be inferred that the participants, on average, had a moderate level of agreement towards the items of digitisation. The mean score of 3.00 suggests that the respondents neither strongly agreed nor strongly disagreed with this statement.

About item 4, “We use digital channels for customer service”, the mean value was found to be 3.08, indicating a moderate level of agreement among the participants. The minimum value recorded was 1, suggesting that some participants strongly disagreed with the statements, while the maximum value of 5 indicated that some participants strongly agreed with the statement. The standard deviation of 0.900 and variance of 0.810 suggest that there was some variability in the responses, indicating that participants' opinions on digitisation varied to some extent.

Concerning item 5, “We use technology to link customer-facing and operational processes”, with a mean value of 3.00, it can be inferred that the participants, on average, had a moderate level of agreement towards the statement. The mean score of 3.00 suggests that the respondents neither strongly agreed nor strongly disagreed with the statements related to the use of technology to link customer-facing and operational processes.

Regarding item 6, the mean value was calculated to be 2.92 with a standard deviation of .986 and a variance of .973. It is important to note that the core processes of the organization are automated, as indicated by the mean value falling below the midpoint of the Likert scale. However, this suggests that there may be room for improvement in the level of digitisation within the organisation. In other words, while there is some level of digitisation present, there is still a need for further enhancement to fully leverage the benefits of digital technologies within the organisation.

Item 7 reported a mean value of 3.06, a standard deviation of .890, and a variance of .792, which indicates that the respondents, on average, had a moderate level of agreement with the statement regarding an integrated view of key operational and customer information. Overall, the respondents were slightly above neutral in their agreement with the statement.

Moving forward, item 8 stands out with a relatively higher mean value of 3.74. This item relates to the use of analytics to make better operational decisions. The higher mean value suggests a stronger tendency towards agreement among the respondents regarding the effectiveness of analytics in improving decision-making processes. Interestingly, these results highlight that the organisation uses analytics to make operational decisions, suggesting a stronger emphasis on data-driven decision-making in the organisation. This indicates a shift towards a more analytical and strategic approach to managing business operations.

Item 9 provides insights into the participants' perceptions and attitudes towards using digital technology to enhance the performance and value of existing products and services. It showed a mean value of 3.30, indicating a moderate level of agreement. The standard deviation was .839 and a variance of 704, supporting the notion of variability in the data.

Item 10, “We have launched new business models based on digital technologies” had a mean value of 3.34, with a standard deviation of .798 and a variance of .637. It showed that the new business models that were launched were based on digital technologies, and the results indicate that the respondents were neutral concerning these models, as evidenced by the mean value.

Overall, the results suggest that this organisation is slowly embracing digitisation across various functions to stay competitive and meet evolving customer demands. The mean values provide insights into the extent of digitisation within this organisation, highlighting areas of strength as well as potential areas for further improvement and investment in digital capabilities. These values range from 0.490 to 1.713, indicating varying levels of agreement and disagreement among the respondents for different items. Moreover, the data reveals that this organisation is increasingly focusing on leveraging digital technology to improve the performance and value of its existing products and services, as well as exploring new business models based on digital technologies. This reflects a proactive stance towards innovation and adaptation in the digital age.

### 7.3. The analysis of variance (ANOVA)

Table 2 presents the results of the ANOVA analysis conducted to examine the relationship between gender and digitisation. It provides information on the sample size (N), mean, standard deviation (Std. Deviation), standard error (Std. Error), and the 95% confidence interval for the mean. ANOVA was chosen because it offers the advantage of assessing the significance of differences between groups. By conducting ANOVA, the researcher was able to determine whether the observed differences in gender categories and digitisation within the organisation were statistically significant or simply due to chance. The results helped in drawing meaningful conclusions and making recommendations regarding gender-related policies and interventions.

**Table 2.** ANOVA gender and digitisation

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
<b>digitisation</b>	Male	22	31.23	8.047	1.716	27.66	34.80	19	40
	Female	28	31.61	8.153	1.541	28.45	34.77	21	42
	Total	50	31.44	8.026	1.135	29.16	33.72	19	42

The results from the ANOVA analysis on gender and digitisation in Table 2 show that there is a slight difference in the mean scores between males and females. The mean digitisation score for males was 31.23 with a standard deviation of 8.047, which is slightly lower than that of females who had a mean score of 31.61 with a standard deviation of 8.153, but this difference is not statistically significant. The total mean score for both genders combined was 31.44, with a standard deviation of 8.026. The standard deviations for both genders are similar, suggesting that the data points are spread out around the mean to a similar extent.

In addition, the 95% confidence intervals for the mean digitisation scores overlap for males (27.66 to 34.80) and females (28.45 to 34.77), further supporting the lack of a significant difference between the two groups. This indicates that there is no significant difference in the attitudes towards digitisation between the two

genders. Additionally, the minimum and maximum scores for both males and females were also similar, further supporting the notion that gender does not play a significant role in shaping attitudes towards digitisation.

In conclusion, based on the ANOVA analysis, gender does not appear to have a significant impact on digitisation scores. Both males and females exhibit similar levels of digitisation proficiency. However, to develop a thorough comprehension of the data, it is imperative to conduct an analysis at both the intergroup and intragroup levels, as illustrated in Table 3. By examining the data from these two perspectives, researchers can gain a more holistic view of the information and uncover patterns or trends that may not be apparent when looking at the data as a whole. This approach allows for a more nuanced understanding of the data and leads to more accurate and insightful conclusions.

**Table 3.** Between and within groups

		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Digitisation</b>	Between Groups	1.778	1	1.778	.027	.870
	Within Groups	3154.542	48	65.720		
	Total	3156.320	49			

The results presented in Table 3 show the analysis of variance for the digitisation variable, indicating the sum of squares, degrees of freedom, mean square, F-value, and significance level for both between groups and within groups. The between-groups analysis reveals a sum of squares of 1.778, with 1 degree of freedom and a mean square of 1.778. The F-value is .027, which is not statistically significant at the .05 level, with a p-value of .870. On the other hand, the within-groups analysis shows a much larger sum of squares of 3154.542, with 48 degrees of freedom and a mean square of 65.720. The total sum of squares is calculated to be 3156.320 with a total of 49 degrees of freedom. These results confirm that there is no significant difference between the groups in terms of digitisation, as the F-value is not statistically significant.

One possible explanation for the lack of significant differences in digitisation experiences between gender categories is that the company's culture may be relatively inclusive and equitable. This could indicate that the organisation values diversity and strives to provide equal opportunities for all employees, regardless of gender. Alternatively, it may suggest that the company has implemented policies and practices that promote gender equality in the workplace. Furthermore, the absence of discernible gender-based differences in digitisation experiences could reflect broader trends within the industry. It may indicate that the industry as a whole is making progress towards gender equality and inclusivity in the realm of digitisation.

#### 7.4. Reliability of the scale

The set of 10 items that make up the variable digitisation has been found to exhibit a high level of internal consistency and reliability, as indicated by a Cronbach alpha coefficient of 0.933. This suggests that the items

are measuring the concept of digitisation robustly and reliably. The strong Cronbach alpha coefficient of 0.933 underscores the reliability of the measurement tools used to assess the variables related to digitisation. This high level of internal consistency instils confidence in the accuracy and precision of the data gathered through these tools.

## 8. Implications of the results

Firstly, the results of the study revealed a notable gender disparity among the participants, with a higher representation of females. This gender distribution has significant implications for understanding the demographics and categories of the study population. The higher proportion of female participants may simply suggest that women were more inclined to participate in the study compared to men. In a more complex analysis, this could be indicative of a greater interest or willingness among females to engage in research or a specific topic. It may also reflect the effectiveness of recruitment strategies that targeted women specifically, resulting in a larger female representation. The gender distribution among the participants may also have implications for the generalisability of the study findings. If the research topic or intervention is gender-specific, the results may be more applicable to females than males. Conversely, if the study aims to draw conclusions that are representative of the entire population, the overrepresentation of females could introduce a potential bias.

Secondly, the variable digitisation comprises 10 items, with a Cronbach alpha coefficient of 0.933, signifying a strong level of internal consistency and reliability in gauging the concept of digitisation. The implications of these results are significant as they indicate that the measurement tools employed to evaluate digitisation are dependable and consistent. Researchers and practitioners can have trust in the reliability of the data collected, allowing for more accurate assessments and informed decision-making based on the concept of digitisation.

Thirdly, the mean values of digitisation across various aspects of business operations ranged from understanding customers better to launching new business models based on digital technologies. These mean values provided insights into the extent to which digital channels, technologies, and analytics are being utilised by the organisation to enhance customer service, marketing strategies, operational processes, and decision-making. The implications of these results suggest that this organisation is actively leveraging digital channels and technologies to improve customer interactions, streamline processes, and drive innovation. The higher mean values in areas such as using analytics for operational decisions and launching new business models indicate a strong emphasis on digitisation and a proactive approach towards adapting to the digital landscape.

Lastly, the analysis of variance (ANOVA) findings suggests that there is no notable distinction in the perceptions towards digitisation when comparing males and females. Additionally, the outcomes from both the between-group and within-group comparisons support the conclusion that there is no substantial variance between the groups concerning digitisation, as the F-value does not reach statistical significance. These results have significant implications for understanding the attitudes and behaviours of individuals towards digitisation, particularly concerning gender differences. The lack of a significant difference between males and females suggests that both genders may have similar perspectives and approaches towards digital technologies. Furthermore, the non-significant F-value indicates that the factors influencing attitudes towards digitisation may not be primarily driven by gender differences but rather by other variables such as age, education, or experience with technology.

## 9. Limitations and opportunities for future research studies

The gender distribution among the respondents in this study was presented, and it showed a larger proportion of females, highlighting the need for researchers to consider gender representation and its implications in their studies. Furthermore, it emphasises the importance of recruiting diverse participant samples to ensure the validity and generalisability of the findings. Furthermore, it encourages further exploration of the underlying factors that contribute to gender disparities in research participation.

The results of the descriptive analysis done on the digitisation scale indicated a positive trend towards digitisation within the organisation, with a focus on enhancing customer experiences, optimising operational efficiency, and exploring new opportunities for growth through digital technologies. These findings can serve as a foundation for further analysis and strategic decision-making to drive continued digitisation and innovation within the technology industry.

The ANOVA findings as well as the outcomes from both the between-group and within-group comparisons support the conclusion that there is no substantial variance between the groups concerning digitisation suggesting that there is no notable distinction in the perceptions towards digitisation when comparing males and females. This finding could inform future research and interventions aimed at promoting digital literacy and adoption, as it highlights the need for gender-inclusive strategies that cater to the diverse needs and preferences of all individuals. This underscores the importance of considering a range of factors beyond gender when examining attitudes towards digitisation and designing effective interventions to enhance digital skills and competencies across different demographic groups.

## 10. Conclusion

In summary, the findings of the study revealed a consensus among the participants regarding their neutrality with some of the statements about digitisation. In addition, the surveyed individuals expressed their inclination towards agreeing with some of these statements, indicating a general acceptance of digitisation. Moreover, it is noteworthy that there was no significant variation observed between males and females in terms of their perspectives on digitisation. This suggests a uniformity of opinion across the surveyed population, further reinforcing the overall agreement towards embracing digitisation.

## 11. Recommendations

To combat the pervasive issue of stereotypes in the workplace, technology industry, and society at large, it is imperative to actively deconstruct gender biases and promote greater participation of women in the technology sector. This involves challenging preconceived notions and societal expectations that limit women's opportunities and hinder their advancement in the field. By dismantling these stereotypes, a more inclusive and diverse environment can be created that not only empowers women to pursue careers in technology but also fosters innovation and creativity through varied perspectives and experiences. Additionally, by encouraging more women to enter the technology industry, the gender gap can be addressed, and organisations can work towards achieving greater gender equality in the workforce.



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