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Digitalization factors influence on enterprise growth among handicraft enterprises in Nairobi City County, Kenya.

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DIGITALIZATION FACTORS INFLUENCE ON ENTERPRISE GROWTH AMONG HANDICRAFT ENTERPRISES IN NAIROBI CITY COUNTY, KENYA

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

Signature: …… Date: 6/4/2024 ……

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APPROVAL

This dissertation of Pauline Kariuki was reviewed and approved for examination by the following:

Signature: …… Date: 04-06-2024 ……

Dr. Henry Muchiri

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DEDICATION

This dissertation is dedicated to my beloved family. Your belief in me has been a constant source of inspiration and motivation. A special dedication goes to the key stakeholders in the culture and creative industry, the artisans. Your dedication and skill in preserving and promoting our cultural heritage through your craftsmanship are truly commendable. Your work not only keeps our traditions alive but also inspires future generations to appreciate and cherish our rich cultural heritage.

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ABSTRACT

Digitalization has become an important component for the survival and growth of organisations and this become even more visible following the COVID-19 pandemic. The anecdotal evidence indicates a growing trend towards digitalization of the handicraft industry but this has been documented in developed nations and Asian context and less remains reported in the context of African and Kenyan handicraft sectors. Therefore, this study investigated digitalization factors that influence growth among handicraft enterprises in Nairobi City County. It examines the extent of digitalization readiness, digitalization acceptance, and digitalization diffusion on the growth of enterprises. The research was anchored on technology readiness, technology acceptance model, and diffusion of innovation theory. The study subscribes to positivist research philosophy and implements an exploratory research design. The target population was 725 registered handicraft manufacturing MSMEs in the Nairobi region from which a sample of 257 owner/managers were recruited into the sample size. A structured questionnaire was designed using close-ended items (background information) and Likert scale (variable information). Descriptive, correlation, and linear regression analysis was done and captured in tables supported by implications and interpretations. The results indicated digitalization (digital readiness, digital acceptance, and digital diffusion) explained 51.1% of variation on growth of handicraft enterprises. Further, digital diffusion, digital readiness, and digital acceptance respectively had a positive and significant effect on growth of handicraft enterprises. The study concludes that digital diffusion is the most important component of achieving digitalization in the handicraft sector. Therefore, the study recommends for knowledge transfer activities supported by higher education institutions as important for MSMEs to achieve digital readiness.

Keywords: digitalization, readiness, acceptance, diffusion, enterprise growth

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LIST OF ABBREVIATIONS AND ACRONYMS

BETA	Bottom-up Economic Transformation Agenda
DOI	Diffusion of Innovation
DT	Digital Transformation
IT	Information Technology
ITC	International Trade Centre
MSE	Medium Sized Enterprises
OI	Open Innovation
PCA	Principal Component Analysis
SN	Subjective Norms
TAM	Technology Acceptance Model
TCC	Tax Compliance Certificate

OPERATIONAL DEFINITION OF TERMS

Digitalization: The integration of digital technologies into everyday activities, transforming how businesses operate and deliver value to customers.

Handicraft Enterprises: Small-scale industries engaged in the production of handmade goods, often using traditional skills and techniques. The handicraft enterprises belong to the manufacturing exports subsector in Kenya.

Digital Readiness: The extent to which an organization is prepared to adopt and implement digital technologies.

Digital Acceptance: The willingness and positive attitude of individuals and organizations towards embracing digital tools and processes.

Digital Diffusion: The process through which digital technologies are spread and adopted across an organization or industry.

Handicrafts: These refer to the creation of useful and decorative objects completely by hand or with simple tools.

SME (Small and Medium-sized Enterprises): Refers to businesses that maintain revenues, assets, or a number of employees below a certain threshold. Typically, these enterprises have between 10 to 250 employees and annual sales below 1 million KShs.

MSME (Micro, Small and Medium-sized Enterprises): Refers to micro-enterprises (those with fewer than 10 employees), small enterprises (10-50 employees), and medium-sized enterprises (51-250 employees) and annual sales below 1 million KShs.

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

The survival of small enterprises is based on their ability to grow and is dependent on their ability to engage in a market dominated by larger firms. Lack of growth increases the likelihood of a small business closing (Machado, 2016). According to Ssempala, Mukoki, and Ntege (2023), growth is a product of the internal processes in the advancement of an enterprise and is measured by the increase in quality or expansion in terms of its size within a specific period.

During the Covid-19 pandemic, MSMEs had experienced low sales turnover and this prompted a wake-up call for the long-term survival. Post-covid, consumers have adapted to the digital environment that is based on reduced activity and limited interactions. The ongoing digitalization has thus created an ecosystem where MSMEs experience challenges and also have opportunities to be able to have a well-connected atmosphere to this digital ecosystem (Khwatenge & Yusuf, 2023).

The subsequent lockdown brought to light challenges of the handicraft sector as majority of entrepreneurs had to close their enterprises due to inability to adopt social distancing measures. More importantly, handicraft enterprises were severely affected by cancellation of all fairs and forbidden supply of non-essential products among e-commerce firms (Ithurbide & Khetrimayum, 2023).

Thus, impacts of the pandemic had a significant role in the hastening of the digital transformation (DT) among large and small businesses in the handicraft industry. The lockdown period was associated with consumers and organizations in the handmade sector moved their operations into digital platforms, purchasing and selling aesthetically pleasing and practical services and goods online. Between 2019 and 2020, the global e-share commerce grew from 14 % to 18 % and is expected to reach 22 % by 2024 (Yadav et al., 2023).

Digitalization (fourth revolution) has brought significant changes in society, business models, and markets. The prospects for digitalization have provided handicraft Micro, Small and Medium Enterprises (MSMEs) an opportunity gain greater access to worldwide markets and thereby increase efficiency of their business processes (Sasaki et al., 2021).

According to Jamaludin et al. (2023), the handicraft sector can tackle new problems and capitalize on new opportunities in the digital era by utilizing digital technologies. Among these are: improving market access, expanding networking opportunities, encouraging product innovation, increasing efficiency and productivity, help to preserve and protect cultural product and improving user experience.

Despite their importance, handicraft entrepreneurs are marginally studied in terms of their digitalization especially in emerging economies (Dana & Salamzadeh, 2021). However, there has been a renewed interest on handicraft enterprises and their survival following the impacts of the global COVID-19 pandemic (Datta & Bhattacharyya, 2016; Ghosal & Prasa, 2019; Suhaimi et al., 2023; (Fillis & Abisuga-Oyekunle, 2017; Kazungu et al., 2018; Basera, Muwani, & Ranganai, 2022).

These advancements in Information Communication and Technology (ICT) are increasing at an exponential rate and businesses of all sizes are taking advantage of this new technology to operate their operations (Suarmaja et al., 2017). However, evidence from Germany (Thonipara et al., 2023), India (Shafi, 2022), Indonesia (Purnomo et al., 2021), Zimbabwe (Basera, Muwani, & Ranganai et al., 2022), and Kenya (Mutinda, 2019) indicate handicraft businesses have been slow in their digitalization. The sector uses traditional methods of production, local materials, and simple tools and its highly dependent on producers. This exposes them to systematic disadvantages due to their limited access to resources, management skills, and size of enterprises (Bischoff & Thonipara, 2023).

1.1.1 Enterprise Growth

The concept of enterprise growth has received attention from researchers and this has resulted in a variety of ways in which the concept can be quantified or measured while the events in which enterprises go through have remained more or less the same. The main stages or phases associated with enterprise growth are start, maturity, and decline (Gupta, Guha, & Krishnaswami, 2013). The early stages of growth were explained by Greiner (1972) to consist of creativity, direction, delegation, coordination, and collaboration. Later, Churchill and Lewis (1983) introduced phases of enterprise growth as existence, survival, success, take-off, and resource maturity.

Other measures of enterprise growth have been used in research. For instance, Ndolo, Mungai, and Mukulu (2018) adopted financial, assets, human resource growth and

profitability as proxies for enterprise growth. Kiriri (2005) suggested that enterprise growth rate measure reflects an enterprise growth for the enterprise's recent year of performance using annual employment, total assets and annual sales as indicators of growth. In Uganda, Ssempala et al. (2023) used sales as a measure for MSMEs growth. Other researchers (Tsuruta, 2020; Sharma & Rai, 2023) have used financial data on turnover, investment, and employment to measure enterprise growth. Using a dummy variable option, Chundu, Pindiriri, and Kaseke (2020) measured MSME growth by asking owners and managers how well the enterprise performed in the present year compared to the previous year.

1.1.2 Digitalization and Small Enterprises Outcomes

Gbadegeshin (2019) defined digitalization as use of any available digital technologies to any human activities including economic, social, personal, and political. Neubert (2018) defines digitalization as a process of increasing dependency on digital technologies in a nation, industry, or organisation. There are different conceptualizations of digitalization in the literature.

Parviainen, Tihinen, Kääriäinen, and Teppola (2017) explain that digitalization in an organisation can contribute to greater exploitation of external opportunities, internal efficiency, and better management of disruptive change. Rosin, Proksch, Stubner, and Pinkwart (2020) describes digitalization based on digital collaboration, customer interaction, processes, services, and products. Kortaba (2017) appreciated that digitalization can be quantified in terms of creating markets, sourcing inputs, and running enterprises while Morakanyane, Grace, and O'Reilly (2017) summarized digitalization into disruption, radicalness, complexity, and continuity.

Chakrouni and Cherkaoui (2023) explained that digitalization consists of technological, organisational, and social dimensions. Guo, Yang, Huang, and Guo (2020) used 3 alternative measures to measure the digitalization degree and these were: overall digitalization, adoption of digital technologies, and businesses mode. In their study, Bischoff and Thonipara (2023) showed that digitalization in the handicrafts business would enhance communication with digital sales channels, software adoption for business processes, automated production processes, and external actors.

These conceptualizations of digitalization all indicate the importance that they would have for handicraft enterprises now and in the future. Suyunovich and Abdihamidovna (2022)

agree that digitalization of handicrafts contributes to faster gathering and location of information about handicraft products in the international market thereby reducing unnecessary costs, time, and labour. Kádárová, Lachvajderová, and Sukopová (2023) support this notion stating that digitalization adoption will enable MSMEs to modernize their production processes, improve their quality of service, and improve communication and collaboration between producers as well as exporters.

Owino and Waema (2020) found that DT (digital resource management, digital enabled strategy, digital sensing capability, digital seizing capability, and digital resource management) contributed to SME competitiveness while Khwatenge and Yusuf (2023) found that digital literacy (digital culture and technical capacity) had marginal influence on performance. In another research, Leposo (2022) found that digitalization (use of internet, website, and mobile money) had positive albeit marginal effects on firm revenue growth

Based on the foregoing discussion, the study extracts significant variables for digitalization that will be adopted in this analysis. Digitalization variable will be measured by the readiness, acceptance, and diffusion aspects borrowing from the technology readiness (TR) theory, technology acceptance model (TAM), and diffusion of innovation (DOI) that have featured prominently in literature on adoption of technology among MSMEs and handicraft enterprises as well.

1.1.3 Handicrafts Enterprises in Nairobi City County

MSMEs dominate the Kenyan handicraft sector and are facing constant challenges in their export trade. The export trade is dominated by middlemen in urban centers who operate in exporting products but do directly engage in the production of handicrafts. The handicraft is important for the development of the economy as a provider of employment for both rural and women and youth as producers and export traders. The export traders work closely with non-governmental organizations (NGOs) and the government through the ministry of Trade and Industry to procure local and international markets (Muiya, 2018).

Their contribution to the economy continues to expand as more people enter into the industry due to unemployment and an increasing need for handicraft products from tourists and burgeoning middle class. Handicraft MSEs have an important role in the international economic development by promoting foreign exchange and investments. Craft workers and artisans are the major players in the production of handicrafts while export enterprises are

secondary players creating and maintaining markets for these products (Kazungu et al., 2018). The handicraft sector belongs to the manufacturing exports subsector in Kenya and includes: handmade/hand decorated fabrics, jewelry, basketry, wood, metal, and leather crafts, ceramics and pottery, beads and traditional artifacts, and stone carvings (Kenya Institute for Public Policy Research and Analysis [KIPPRA], 2020).

Nairobi City County (NCC) is popular as a major business hub due to its unique location that is able to accommodate a myriad of entrepreneurial activities. Many of the leading SMEs operate within Nairobi Metropolitan Area and among these are handicraft enterprises dealing with a wide array of products. These enterprises are located by curio shops in the central business district (CBD), open-air markets, and shopping malls. The international recognition of handicraft products by international organisations has promoted their place in international business. The United Nations Educational, Scientific and Cultural Organization (UNESCO), International Trade Centre (ITC), and Tax Compliance Certificate (TCC) categorize handicraft products into 'artisanal products' (Cherotich, 2021).

Several studies indicated decline in performance of handicrafts sector in Kenya way before the pandemic. Mukami (2012) explained that handicraft enterprises faced economic and political constraints in their effort to operate and venture into the global market place. Kamuiru (2015) stated that there lacked a quality measures and criteria adopted by handicraft manufacturers thereby reducing products that thrive in the global market. Muiya (2018) noted that the community-based tourism business model practiced in Kenya faced reduced participation by stakeholders thereby limiting its maturity. Matayo, Osanjo, and Odundo (2023) reported that production of similar or identical handicrafts limited their competitiveness in the international market. Based on this situational analysis of the handicraft sector, this research premise is that increased utilization of digitalization strategies among handicraft MSMEs might help to overcome these limitations.

1.2 Statement of the Problem

Digitalization has been proved to be important in increasing efficiency and productivity of business. There is evidence from different studies (Mwangi et al., 2023; Khwatenge & Yusuf, 2023) that higher adoption of digitalization was significantly associated with improved revenue growth. Yet, evidence (Datta & Bhattacharyya, 2016; Suhaimi et al., 2023; Basera et al., 2022; Fillis & Abisuga-Oyekunle, 2017; Mwangi et al., 2023), the

handicrafts industry has experienced a decline in growth exacerbated by COVID-19 pandemic. This decline in growth however can be offset by adoption of digitalization.

Previous research (Katri & Kothari, 2018; Ghosal & Prasa, 2019; Vaculčíková, Tučková, & Nguyen, 2020) agree that digitalization would can design, creation, production, and marketing of handicraft products. The use of digital technologies has been seen to drive business performance and revenue (Khwatenge and Yusuf, 2023; Leposo, 2022).

This means there is a need for better understanding on the influence digitalization has on growth on handicraft enterprises. This is of importance for entrepreneurs to enhance their resilience and also for government agencies to better placed to take action to implement its digital economy blueprint. While there are studies (Mwangi et al., 2023; Leposo, 2022; Owino & Waema, 2020; Khwatenge & Yusuf, 2023) on digitalization in and around MSMEs in Kenya, paucity exists on digitalization in the handicrafts sector and this is a gap this study aims to contribute.

1.3 Research Objectives

1.3.1 General Objective

This study's main objective was to examine digitalization factors influence on enterprise growth among handicraft enterprises in Nairobi City County, Kenya.

1.3.2 Specific Objectives

The Specific objectives of the study were:

i. To assess influence of digital readiness on growth of handicraft enterprises in Nairobi City County
ii. To assess effect of digital acceptance on growth of handicraft enterprises in Nairobi City County
iii. To analyse influence of digital diffusion on growth of handicraft enterprises in Nairobi City County

1.4 Research Questions

The study answered these questions:

i. How does digital readiness of handicraft enterprises in Nairobi City County influence their growth?

ii. How does the digital acceptance of handicraft enterprises in Nairobi City County influence their growth?

iii. How does the digital diffusion of handicraft enterprises in Nairobi City County influence their growth?

1.5 Scope of the Study

The study focused on handicraft businesses operating from the Nairobi region. The study will be limited to those enterprises that fall under: handmade/hand decorated fabrics, jewelry, basketry, wood, metal, and leather crafts, ceramics and pottery, beads and traditional artifacts, and stone carvings. The study examined digital readiness, acceptance, and diffusion as independent variables while growth of handicraft enterprises was the dependent variable. The respondents were limited to the owner/managers of the sampled enterprises. The study was anchored on technology readiness, technology acceptance model, and diffusion of innovation theories. Lastly, the research was conducted from January to June 2024.

1.6 Significance of the Study

This research makes valuable insights and practical implications for various stakeholders.

1.6.1 Policy and Decision Makers

The Bottom-up Economic Transformation Agenda (BETA) prioritizes the enhancement of manufacturing activities through MSMEs as a key to job and wealth creation and driver of economic growth. Further, digitalization is a key priority area under the Social Pillar of the BETA suggesting its importance for both social and economic development. Therefore, findings will be useful in formulation of policy that will promote readiness, acceptance, and diffusion of digitalization among handicraft enterprises. Additionally, industry stakeholders, such as craft associations and trade organizations, can utilize the study's findings to design targeted programs, training, and resources that empower craft businesses to embrace digitalization effectively.

1.6.2 Handicraft Enterprises

The study's findings will provide handicrafts businesses in NCC with information on their digitalization readiness, acceptance, and diffusion providing these enterprises with information to reflect on their digitalization journey. Additionally, from these findings, recommendations will be made to assist enterprises navigate barriers towards their successful adoption of digitalization to grow their businesses.

1.6.3 Digital Companies

The study aims to benefit the vibrant information technology (IT) market in Kenya by showing the importance of a digitalization strategy for handicraft MSMEs as a means to maintain and enhance their growth. The findings from this study will make recommendations which if adopted by these players can contribute to the creation of applications that can be tailored to the needs and demands of handicraft enterprises to design, produce, and market their products.

1.6.4 Academic Contribution

There is an abundance of research that has examined digitalization among enterprises but there is less evidence, especially from the Kenyan context, that has done the same for the handicraft sector. This is one contribution the study makes. Secondly, less research has adopted a digitalization model where different theories have been used to show the journey from readiness, acceptance, and diffusion of digitalization in the handicraft sector. This

means that the study will be useful in providing empirical evidence in support or debunking of the theories used in the research. Further, the study will make contributions to existing empirical literature on digitalization among handicraft enterprises post COVID-19 while making recommendations from further research.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents a theoretical review and empirical review of literature while giving a summary and identifying research gaps. The study's conceptual framework and operationalization of variables are presented too.

2.2 Theoretical Review

Undertaking a theoretical review helps in identifying the existing theories relevant to a study but it also allows for the assessment of theories that are relevant to create a better understanding of a problem and its variables (Turner, Baker, & Kellner, 2018).

2.2.1 Technology Readiness Theory

The research adopts Parasuraman's (2000) technology readiness (TR) theory which examines the propensity of a person's adoption of new technology using the four personality dimensions namely: insecurity, discomfort, optimism, and innovativeness (Rahardja et al., 2023). Optimism is the positive attitude towards technology and its adoption would contribute to efficiency, control, and flexibility. Innovativeness refers to the idea of being the leader and pioneer in adoption of a technology and it measures the extent to which a person sees themselves as the forefront (Parasuraman & Colby 2001).

Discomfort refers to feelings of lacking control over a technology and experiencing an overcome by it and this measures the concerns and fear that a person may experience when dealing with a new technology. Insecurity describes the skepticism or lack of trust of a technology and how it would work properly and the extent to which a person may experience when facing technology-based transactions (Parasuraman & Colby, 2001). In measuring these constructs, innovativeness and optimism are drivers towards technological readiness while insecurity and discomfort will inhibit this readiness (Panday, 2018).

2.2.2 Technology Acceptance Model

Davis, Bagozzi, and Warshaw (1989) developed the Technology Acceptance Model (TAM) and is a framework that explained information technology (IT) adoption behaviour. The model is an advancement from the limitations of the theory of reasoned action (TRA) in terms of IT adoption. The TRA focuses on the attitude of individuals in their adoption

behaviour but did not contribute to the dimension of subjective norms (SN). The TAM was created to understand user acceptance and identify causal relationship between individual beliefs, behavioural intentions, and attitudes.

The TAM recommend that adoption of technology is based on perceived usefulness (PU) and perceived ease of use (PEOU). The concept of PU is the individual user subjective likelihood that using an IT system will increase their productivity in an organization while PEOU is the degree to which the individual user of an IT system expects it to be free from any efforts. The other likely influences to using IT is of actual use and intention and are hypothesized to be determinant of the PEOU and PU (Bonfanti et al., 2023).

2.2.3 Diffusion on Innovation Theory

Rogers (2003) advanced the Diffusion of Innovation (DOI) is focused on the spread whether at group or social level and the behaviour of adopting a technological innovation experienced at the personal level. The DOI is focused on adoption of technological innovation and is not limited to IT (Rogers, 2003). The DOI proposes explicit and implicit series of constructs and dimensions that act as factors of a person's behaviour of adopting new technology.

The first group of variables are perceived attributes of innovation. The first is relative advantage which is an extent to which a technology innovation is more efficient than the present technology in terms of profits. Compatibility is the perceived consistency of the values, experiences, and needs of likely adopters. Complexity refers to the extent to which a technological innovation is deemed as difficult to use and understand. Trialability refers to how individuals can experiment with a new technological innovation on a limited scale or basis. Lastly, observability is the extent to which results of a technological innovation can be seen by others (Shaffi, 2021).

2.3 Empirical Review

The purpose of an empirical review of literature is to report previous research so as to understand precisely what was done and what was found so assess to what degree the research could be replicated to achieve the same findings (Nakano & Muniz, 2018).

2.3.1 Digitalization readiness and Growth in Handicraft Sector

In Malaysia, Vaculčíková et al. (2020) investigated the utilization of digital marketing tools and strategies adopted by village handicraft producers from a sample of 100 businesses

spread in 11 villages. The sample was included in a consultancy and training course in e-marketing. Majority of the companies did not have computers in their businesses and this was among the private enterprises, individual entrepreneurs, and cooperatives.

In Indonesia, Larasati, Widyawan, and Santosa (2017) research among craft MSMEs was done to test the adoption of an integrated information system that was designed for an Enterprise Resource Planning (ERP) using four simple modules of Production, Sales, Marketing and Finance. The results revealed that MSME readiness to ERP acceptance and adoption among craft MSMEs indicating that technology readiness have several effects on PEOU and PU on ERP implementation.

Antan and Nur (2023) did research to identify their issues and drivers for The Fourth Industrial Revolution (4IR) among 101 MSMEs in an online survey. The respondents indicated that human, financial resources coupled by administrative, operational, marketing, and organisational management challenges were a hindrance to readiness to digitalization for MSMEs.

Panjaitan et al. (2021) explored MSMEs technology readiness and their capacity to rival others in their sector gathering data from a sample of 170 entrepreneurs. The respondents indicated that digital value mediated the association between digital capabilities and technology readiness. Moreover, the changing consumer preferences for making digital transactions were important in intensifying the relationship between digital competitive capabilities and technological readiness.

Rafiah et al. (2022) explored digitalization readiness among 113 MSMEs along the technology, integration, strategy, process, people, and technology. The findings would indicate that MSME readiness levels were very low and out of the five variables, people aspect showed the highest readiness level. Further, the MSMEs were in their early stages of determining their best strategy for their digitalization journey.

Persulessy and Silaya (2020) examined the technology readiness among pearl and shell handicrafts to adopt IT by employing the Technology Readiness Index (TRI) model. The sample consisted of 43 owner/managers that were administered questionnaires and the data analyse using Partial Least Square (PLS). There were positive impacts from optimism and innovativeness while negative effects were from discomfort and insecurity aspects to adopt IT.

Chotijah and Retrialisca (2020) using a sample of furniture MSMEs and their adoption of IT employing the TAM and TRI and the data was analysed by PLS method. Furniture sector MSMEs were found to ready to adopt IT; however, the insecurity and discomfort perceptions were significant factors that hindered the adoption of IT.

In another technology readiness study, Purnomo et al. (2021) did an analysis of characteristics that influenced adoption of technology among different clusters of artisans based on their superiority. The MSMEs were from different sectors and the sample represented 1,092 business enterprises. Majority of MSMEs were not technologically ready while others were active in the adoption of technology and had better technology and more skilled workers.

Sari and Ahmad (2022) examined MSMEs readiness towards digital literacy as a means by which they dealt with the COVID-19 pandemic by using a literature review approach. The sample of studies consisted of 25 articles from Google Scholar which revealed that MSMEs survival in periods of limited direct access with consumers and uncertainty, MSMEs needed to be ready for digital literacy was crucial. Digital literacy readiness was found to assist these enterprises develop during and after the pandemic while also covering their weaknesses.

In Sri Lanka, Madurapperuma and Wijayanayake (2021) performed a study on determinants of readiness in e-business and digital marketing by way of a Systematic Literature Review (SLR). The PRISMA 2020 method of reviewing literature was used and 105 articles were selected from various databases. It was revealed that infrastructure and technology, supportive industry, management support, knowledge and skills, budget and finance, and market forces were significant in explaining readiness factors to adopt digital marketing. The study was limited to a literature review and included different sectors not only handmade sector.

In Nigeria, Ayegba et al. (2019) analysed predictors on SMEs growth and survival among 244 CEOs from 244 SMEs in the Niger Delta Region. This study employed the structural equation model (SEM) for the analysis of the model. A positive effect of technology readiness on e-commerce applications was revealed and this also contributed a 20% increase in growth of enterprises.

2.3.2 Digitalization Acceptance and Growth in Handicraft Sector

In Germany, Scheepers, Angerer, and Dragano (2020) did research on employees and managers perceptions on digitalization using 26 qualitative interviews to better grasp their understanding of digitalization in the handicraft sector and its effects on health. The qualitative content analysis revealed that digitalization was able to simplify work by making information accessible while performing the craft work was perceived as psychological stressful. Moreover, increased stress resulted from connecting with continued workplace surveillance and accessibility.

In Scotland, Camilleri (2018) examined owners' PEOU of digital media on stakeholder participation integrating measuring items from the TAM. The SME owners' PU and speed of technological innovation was found to have a positive relationship with the PU of SMEs for digital media also influenced communication purposes. In another research, Bischoff and Thonipara (2023) examined the relationship between craft owner individual traits on DT using the Big Five personality theory. The sample consisted of 554 crafts' enterprises owners. The factor and regression analysis revealed owners' personality traits of openness and extroversion had a positive effect on digitalization level of crafts MSMEs.

In China, Shafi et al. (2021) research examined determinants of consumer acceptance in handicraft products so as to design a scale/construct adapted to handicraft enterprises. A descriptive cross-sectional survey was done and majority of consumers were open to accept innovation especially those that did not change the conventional features of products such as quality-related innovations, authenticity, and packaging.

In India, Meher et al. (2021) examined those factors that influenced MSME growth in a sample of 454 respondents and the findings indicated that there was a preference for digital banking using correlation analysis. The preference for digital banking was influenced by easiness associated with making payments, accepting payments, managing expenditures, checking theft or misappropriation of cash, and saving time which all contributed to MSMEs growth.

In Indonesia, Santoso et al. (2020) research on social media utilization among handicraft producers and its effect on marketing and export performance among 301 respondents. There were direct effects of PEOU in predicting market performance while relative

advantage had a significant prediction on marketing performance. PEOU and relative advantage were significant predictors.

In Mauritius, Gobin-Rahimbux, Cadersaib, Sahib, and Khan (2017) survey investigated SMEs awareness, acceptance, and utilization to undertake their business in a sample of 43 enterprises. The analysis revealed Facebook led the pack in terms of awareness but their awareness did not have any influence on their technology acceptance. Additionally, more than half of the enterprises did not use technology in marketing, stock taking, supply, and consumers. Those factors influencing technology acceptance were time, training, cost, PEOU, perceived benefits, and nature of business.

In Ghana, Karanasios, Senyo, and Effah (2022) did a study on digital transformation of micro-enterprises following a qualitative design that used interviews to gather information from conducted in-depth semi-structured interviews with micro-enterprises, government agencies, mobile network operators (MNOs), FinTech and technology firms. The findings revealed digitalization acceptance may not always translate to growth of MSMEs. This was due to use of free technologies for communication, advertising and promotion, and operations that hampered their growth.

Using the theory of planned behavior (TPB), Bruce et al. (2023) revealed that that SME owner/managers attitudes for digital marketing had no effect on intention to use digital marketing. The subjective norms (SN) and perceived behaviour control (PBC) all influenced respondent chances of using digital marketing. Moreover, the association among use of digital marketing and SME growth was found.

In Zambia, Sinkala (2023) undertook an exploration into usage of mobile money with the burgeoning SMEs incorporating quantitative and qualitative methods in a sample of 150 entities. The outcome was that an association was present among mobile money services use and growth of SMEs in terms of wider market access, enhanced financial management, and increased operational efficiency.

In Kenya, Gekombe, Tumsifu, and Jani (2019) looked into PEOU and PU of using social media among 394 fashion SMEs in Kiambu and Nairobi counties. The findings from multivariate analysis indicated PEOU had an effect on intention for social media use and this usage contributed to SME growth. Despite its contribution to enterprise growth, respondents had no motivation to use it.

2.3.3 Digitalization Diffusion and Growth in Handicraft Sector

In Germany, Hassan et al. (2024) assessed SMEs digitalization and their performance among 1,100 enterprises using secondary data from diverse industries and sectors (energy and water, technical or research and development (R&D) services, transport equipment and postal services, consulting, automobile retailers, glass, and ceramics). The findings revealed there was a higher diffusion of digital technologies among SMEs that were more likely to innovate new products in their industry.

Rivares et al. (2019) conducted empirical research in selected European and US markets in the hospitality, retail, and transport sectors using secondary data from Orbis and Google Trends. The findings indicated no significant effect on 'disruptor' technologies on the productivity of SMEs in these sectors indicating there was low diffusion of disruptive technologies among these sectors.

In Israel, Harel, Schwartz, and Kaufmann (2019) revealed that open innovation (OI) tools were useful in promotion of small businesses promotion in innovation among a sample of 202 handicraft enterprises. There was a difference in terms of OI tools for knowledge acquisition from external open sources; the use of these tools contributed to the extent of network collaboration, product innovation, and external collaboration contributing to process and market innovation. Moreover, businesses-maintained networks to promote innovation in those firms closest to their business environment.

In Indonesia, Dumasari et al. (2017) research was on determinants on power of adopting production technology in a sample of 28 micro souvenirs creative enterprises. The findings revealed that environmental, social, and economic motivations were behind this adoption; other motives included designing products based on market trends, product price, and economic feasibility were all closely associated with adoption. There was a marginal use of craftsmen that were using mechanical technology.

Dyah et al. (2017) did research on technology diffusion and its role in the growth of SMEs in food processing where Focus Group Discussion (FGD) and questionnaires were used to gather information. Government support, skilled users (capability), technology accessibility and availability were important to determine speed of technology diffusion and this contributed to overall SME growth.

In Bangladesh, Azam (2015) assessed the ICT diffusion among SMEs in their post-adoption stage by examining the value creation from ICT use employing a mixed method in a sample of 282 owners/managers. It was confirmed that ICT use did not increase growth of SMEs straightaway. Organisations should acquire the integration and proper utilization of the technology to achieve performance growth.

In Ethiopia, Dessie, Mengistu, and Mulualem (2022) research was on craftspeople communication habits and innovation adoption to improve business performance by way of a cross-sectional design. There were 326 respondents from which analysis revealed that communication habits were significant for innovativeness and integrate them with their consumers. Furthermore, frequency of communication, reflexivity, market and product innovation had a significant association with craft enterprises performance.

In Zambia, using the VT$ theory, Kakumbi and Phiri (2022) examined social media adoption influence on SME growth adopting a quantitative research methodology among SME staff in the clothing industry. The dimensions measured were volume, tone, topics, ties and timing (VT4) from which the results indicated a statistical relationship of these dimensions on SME growth.

In Kenya, Mararo (2018) research was on digital banking diffusion and its influence on SME growth in Nakuru County by employing descriptive research design from a sample of 100 owners/managers. The findings revealed that mobile banking, mobile finance, mobile payments contributed significantly and positively to SME growth. Subsequently, Mutinda et al. (2019) explored MSMEs degree of technology adoption among leather manufacturing firms with 81 simple randomly selected owner/managers. The analysis revealed that none of the enterprises had implemented any soft technology while only a few had implemented hard technology that consisted of machinery use. The main factor that contributed to low rates of technology adoption was financial constraints while other factors were commitment failures from top management, inadequate technical skills, and competition.

Table 2.1: Literature Review Summary and Knowledge Gap

Author	Topic	Main findings	Methodological Gaps	Study filling gap
Antan & Nur (2023)	Micro, Small, and Medium Enterprises' Readiness for Digital Transformation in Indonesia	Digitalization readiness was determined by financial, human resources, marketing, operational, administrative, and organizational management	The study did not examine what influence if any that digitalization readiness had on growth of enterprises	This study measured relationship between readiness and growth of enterprises
Ayegba et al. (2019)	Assessing Mediation Effects of E-Commerce Adoption and Organizational Innovations on the Relationship Between Growth of SMEs and Technological Readiness in Nigeria	Technology readiness had a positive and significant effect on growth of SMEs	The study was limited to SMEs engaged in E-commerce	The study includes all handicraft enterprises operating online and offline
Azam (2015)	Diffusion of ICT and SME Performance: E-Services Adoption: Processes by Firms in Developing Nations	ICT use does not increase performance growth of SMEs	The research limited itself to ICT	The study did not limit itself to any digital technologies
Bischoff & Thonipara (2023)	Digital divide, craft firms' websites and urban-rural disparities—empirical evidence from a web-scraping approach	Owner's personality traits (extraversion and openness) positively affected digitalization level	The moderating effect of maturity level of MSMEs was examined	The study examines the digitalization aspects and growth of handicrafts MSME
Bruce et al. (2023)	Effect of Digital Marketing Adoption on	A relationship between acceptance of digital marketing and SMEs'	The study was limited to digital marketing technologies	The study did not limit itself to any digital technology

	SMEs Sustainable Growth: Empirical Evidence from Ghana	sustainable growth was established		
Camilleri (2018)	The SMEs' Technology Acceptance of Digital Media for Stakeholder Engagement.	There was a relationship between technology acceptance and use of digital communication platforms in SMEs	The study did not examine the relationship between acceptance and growth of enterprises	This study measured relationship between acceptance and growth of enterprises
Chotijah & Retrialisca (2020)	Analysis of Information Technology Readiness in Furniture Business in Indonesia	The furniture sector SMEs in Java are prepared to adopt IT	The survey was limited to furniture producers	The study includes different handicraft producers
Dessie et al. (2022)	Communication and innovation in the performance of weaving and pottery crafts in Gojjam, Ethiopia	Communication practices vital for craftspeople to be innovative and integrate them with clients were poor	The research was limited to communication practices and innovation implementation	This study examines association between digitalization factors and growth of handicraft enterprises
Dumasari et al. (2017)	Various Determinant Factors of Production Technology Adoption in Creative Souvenir Micro Enterprise.	Economic, social and environmental motives explained diffusion of technology	The sample was limited to micro souvenirs creative enterprise	The study includes different handicraft producers in Kenya
Dyah et al. (2017)	The speed of technology diffusion and its role in SMEs' growth	Speed of technology diffusion encouraged the growth of SMEs	The sample was limited to food processing MSMEs	The study included different handicraft producers in Kenya
Gekombe et al. (2019)	Social media use among small and medium enterprises: A case of fashion industry growth	Social media use had a significant influence on SME growth	The study was limited to social media	The study did not limit itself to any digital technology
Gobin-Rahimbux et al. (2017)	Investigating Technology Awareness	There was no technology use in	The research was limited to descriptive analysis	This study uses inferential statistics to examine

	and Usage in Mauritian SMEs in the Handicraft Sector	Customer, Supplier, Stock and Marketing		relationship between variables
Harel et al. (2019)	Open Innovation in Small Businesses in The Industry and Craft Sectors	Businesses maintained connections to promote innovation with their closest business environment entities	The research was limited to OI technology	the study is focused on all available digital technologies available for handicraft SMEs
Hassan et al. (2024)	Is digitalization a source of innovation? Exploring the role of digital diffusion in SME innovation performance	Higher digital diffusion in an SME, the more likely it is to innovate and grow	The sample did not include handicraft SMEs	The study was limited to handicraft enterprises
Kakumbi & Phiri (2022)	Adoption of social media for SME Growth in the Covid-19 Era: A Case of SMEs in the Clothing industry in Lusaka, Zambia	Social media adoption and SME growth relationship was established	The study was limited to social media	The study included all digital technologies available for handicraft enterprises
Karanasios et al. (2022)	Transformation of Micro-Enterprises in Ghana Digital Transformation of Micro-Enterprises in Ghana	Digitalization acceptance may not always translate to growth of MSMEs	The study was limited to financial technological services	The study did not limit itself to any digital technology
Larasati et al. (2017)	Technology Readiness and Technology acceptance model in new technology implementation process	There was evidence of readiness factors on adoption of ERP	The study was limited to ERP as a technology	This study includes all forms of digital technology available for handicraft enterprises

Madurapperuma & Wijayanayake (2021)	Readiness Factors for SMEs in eBusiness to adapt digital marketing	Technology, infrastructure, market forces, supportive industry, finance, budget, skills, knowledge and management support influenced readiness	The study was a literature review	This study uses a descriptive research design
Mararo (2018)	Influence of Mobile Money Services on the Growth of SME in Nakuru Town Kenya.	Mobile payments, mobile finance and mobile banking had positive significant relationships with growth of SMEs	The study was limited to financial digital technologies	The study included all digital technologies available for handicraft enterprises
Meher et al. (2021)	The impact of digital banking on the growth of Micro, Small and Medium Enterprises (MSMEs) in India: A case study	Digital banking acceptance assisted MSMEs in their growth	The study was limited to digital banking	The study includes all forms and types of digital technologies available for handicraft enterprises
Mutinda et al. (2019)	Analysis of Technology Adoption by the SMEs/Artisan in Leather Products Manufacturing Processes in Kenya	Financial constrain was cited as the main reason for the low rate of technology adoption	The respondents were limited to leather footwear and leather goods manufacturing	The study includes different handicraft producers in Kenya
Panjaitan et al. (2021)	Technology Readiness and Digital Competing Capabilities: Digital Value Resonance	Consumer preferences strengthened relationship between technological readiness and digital competitive capabilities	The study did not examine what influence if any that digitalization readiness had on growth of enterprises	This study measured relationship between readiness and growth of enterprises

Persulessy & Silaya (2020)	The readiness to adopt information technology on SMEs	The findings confirmed the positive and negative effects of TR dimensions	The survey was limited to bead and pearl handicraft producers	The study includes different handicraft producers
Purnomo et al. (2021)	The Dynamics of Technology Adoption Readiness of Micro, Small, and Medium Enterprises and Affecting Characteristics	Technological readiness was associated to workforce and entrepreneur characteristics	The survey was not limited to handicraft enterprises	This research is limited to handicraft enterprises
Rafiah et al. (2022)	Digital Readiness of SMEs: An Insight from Indonesia	The human factors were most important for achieving digital readiness	The study was limited to descriptive methods of analysis	This study measured relationship between readiness and growth of enterprises
Rivares et al. (2019)	Like it or not? The impact of online platforms on the productivity of incumbent service providers	Disruptive technology did not have a significant effect on productivity of MSMEs	The study was limited to secondary data from Google	The study used primary data from respondents' perceptions
Santoso et al. (2020)	Determinants of Social Media Use by Handicraft Industry of Indonesia	PEOU had a positive effect on marketing performance	The dependent variable was performance	The dependent variable in this case is growth of handicraft enterprises
Sari & Ahmad (2022)	Digital Literacy Readiness from The MSME Perspective: Literature Review	MSME readiness in digital literacy is very important.	The study was a literature review	This study uses a descriptive research design
Scheepers et al. (2020)	Digitalisation in Craft Enterprises: Perceived Technostress, Readiness for Prevention	Clients demanded the faster processing of offers	The qualitative research approach was used	The quantitative approach will be used

	and Countermeasures - A Qualitative Study.			
Shafi et al. (2021)	Factors Influencing the Consumer Acceptance of Innovation in Handicraft Products.	Most consumers are open to accepting innovation in handicrafts.	The sample was limited to consumers	The sample includes owner/managers of handicraft enterprises
Sinkala (2023)	Mobile Money and SME Growth: A Zambian Perspective	There was a positive relationship between acceptance of mobile money and SME growth	The study was limited to mobile money	The study did not limit itself to any digital technology
Vaculčíková et al. (2020)	Digital marketing access as a source of competitiveness in traditional Vietnamese handicraft villages	Most of the businesses did not have computers to support their business	The research was limited to descriptive analysis	This study uses the Technology readiness index (TRI) to analyse readiness of handicraft enterprises to digitalization

Source: Author (2024).

2.5 Conceptual Framework

Figure 2.1 maps the independent and dependent variables along with each of their indicators.

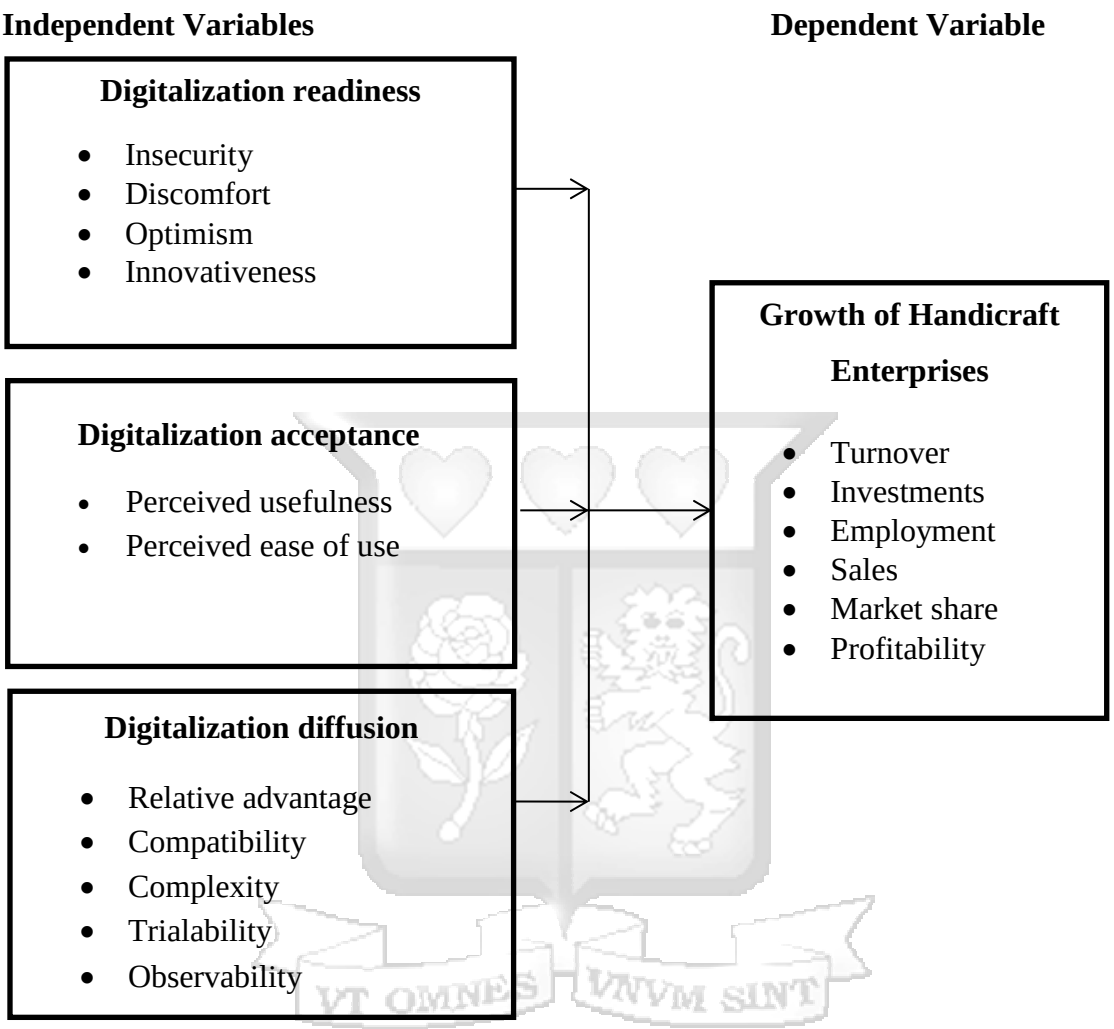

Figure 2.1: Conceptual Framework
Source: Author (2024).

Table 2.2: Operationalization of Variables

Variables	Indicators	Scale	Source
Digitalization readiness	• Insecurity • Discomfort • Optimism • Innovativeness	5-point Likert scale	Parasuraman (2000)
Digitalization acceptance	• Perceived usefulness • Perceived ease of use	5-point Likert scale	Davis et al. (1989)
Digitalization diffusion	• Relative advantage • Compatibility • Complexity • Trialability • Observability	5-point Likert scale	Rogers (2003)
Growth of handicraft enterprises	• Turnover • Investments • Employment • Sales • Market share • Profitability	5-point Likert scale	Gupta et al. (2013); Ndolo et al. (2018); Tsuruta, (2020); Sharma & Rai, (2023)

Source: Researcher (2024)

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides a detailed description of the research philosophy, population and study setting, data collection instrument, analysis of data, reliability and validity, and its ethical considerations.

3.2 Research Philosophy

The positivist research philosophy is the selected as suitable for this research due to its application of scientific methods in examining social phenomenon. Using this philosophy implies that this research will employ objective rather than subjective techniques in the selection of a sample and subsequent collection and analysis of data (Shah, & Al-Bargi, 2013).

Positivists adopt quantitative data collection which is analysed using statistical methods to arrive at conclusions which are independent of the views of the researcher and therefore this philosophy is deemed sufficient in achieving its overall objective (Shah & Al-Bargi, 2013). This study therefore adopted the positivism philosophy as it collected data from a sample and objectively (statistically) measured association and relationship between digitalization factors and growth of handicraft enterprises.

3.3 Research Design

The research design adopted in our study is an exploratory approach. Given the evolving nature of digitalization and its impact on business such as handicrafts enterprises, an exploratory research design was deemed appropriate to delve into this relatively unexplored area. Through this design, the study gathered rich, in-depth insights into the interactions between digitalization factors and enterprise growth. This approach allowed for a comprehensive exploration of the research topic, facilitating the generation of hypotheses and the development of a nuanced understanding that can inform future research and practical interventions in the field.

3.4 Population and Sampling

3.4.1 Target Population

Alvi (2016) defined a target population as units that meet specific characteristics that are of interest to research. It assists a researcher to avoid having units represented in the sample that do not the criteria to be selected (Casteel & Bridier, 2021). Using the 2022 Kenya Association of Manufacturers (KAM) registered firms, the target population was defined as the 725 manufacturing firms in Nairobi City County from which the handicraft subsector falls under.

3.4.2 Sampling Frame and Sample Size

Sampling frame is operationalized component of a population and represents the final list of all the elements from which a sample is recruited (Alvi, 2016). The sampling frame consisted of the 725 manufacturing firms where the Yamane (1967) formula was used to determine the sample size where simple random method was used to select the 257 handicraft enterprises owners/managers.

$$n = \frac{N}{1 + N\ (\mathrm{e})2}$$

Where;

n = sample size

N = study population

e = tolerance at the preferred level of confidence

α = 0.05 at 95% confidence level.

$$n = 725/\ 1 + 725(0.05)^2$$

$$n = 725 / 1 + 725*0.0025$$

$$n = 725 / 2.8125$$

$$n = 257$$

3.5 Data Collection Instrument

A structured questionnaire was adopted as the main tool for data collection administered to owners/ managers of handicraft enterprises using the drop-off and pick-up mode of administration complimented by using Google Forms. The questionnaire was limited to close-ended questions that provide response options respondents to select and 5-Point Likert scales for collecting variable information. The questionnaire has several sections namely: general information (gender, education level, experience, subsector, firm size, and

annual turnover); digitalization readiness (13 items), digitalization acceptance (10 items); digitalization diffusion (9 items); and enterprise growth (6 items).

3.6 Analysis of Data

The Statistical Software for the Social Sciences (SPSS) Version 26 was used to perform data analysis that began by assigning codes to the response items and capturing this information into SPSS. Descriptive statistical analysis is the simplest form of making sense of large datasets and this was accomplished by undertaking frequency and count distributions from the general information data. The measures of central tendency (Mean and standard deviation) tests were used to summarize the Likert data. The next phase consisted of undertaking inferential analysis by way of Pearson (*r*) correlation analysis to determine association between variables and ordinal least squares (OLS) regression to examine effects of digitalization factors on growth of handicraft enterprises. The proposed model was:

$$Y = a + \beta_1 DR_1 + \beta_2 DA_2 + \beta_3 DD_3$$

Where:

Y = Enterprise growth

DR = Digitalization readiness

DA = Diffusion acceptance

DD = Digitalization diffusion

3.7 Research Quality

The validity and reliability of the research instrument was determined to improve the quality of this research. Validity is whether an instrument is able to justify its accuracy in measuring constructs or variables under investigation. A valid instrument means that the respondents will give honest information of their views rather than just giving information that an interviewer wants to hear (Young, 2016). Validity may not be fully guaranteed but it can be disseminated if the questionnaire is clear on the expectations from respondents and also guarantees and maintains confidentiality and anonymity of respondents (Young, 2016).

The ability of an instrument to be consistent and stable is defined as its reliability; it is the extent to which an instrument can be able to replicate similar findings or results after different administrations in a different sample (Young, 2016). In quantitative research, there are tests that can be used to determine the reliability of an instrument, in this case, the internal consistency method of checking for reliability was used for Likert scale items. The Cronbach's Alpha test acceptable cut-off point for reliability was 0.7 (Jugessur, 2022). To perform this test, a pilot study was done among 20 owners/managers selected from the sample and were excluded for its final administration so as to avoid contamination of respondents. The rule of thumb from the literature is to select at least 10 % of the sample size for a pilot (Hertzog, 2008). Thus, the instrument was piloted among 20 owners/manager of handicraft enterprises.

3.8 Ethical Considerations

Any research involving human subjects should always consider the ethical principles of not causing harm, ensuring privacy, confidentiality, honesty, integrity, and the responsible reporting of the data. In meeting ethical standards of collecting information from human participants, the researcher obtained ethical approval from the Strathmore University Institutional Ethics Review Committee (SU-IERC) and a research license from the National Commission for Science, Technology and Innovation (NACOSTI).

CHAPTER FOUR
DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents the data analysis and findings. These findings were presented in terms of background information, research objectives, correlation, and regression analysis.

4.2 Response Rate

A pilot study was done with 20 respondents and these were excluded from the final administration. Out of the 257 administered questionnaires, 149 valid responses were obtained and used in the analysis. This translated to a response rate of 57.9% which was deemed acceptable. Morton et al. (2012) recommends that a return rate approximating 60% is considered good. The non-response also emerged from some of the enterprises having closed during and after the pandemic.

Table 4.1: Response Rate

Categories	Count	Percent
Questionnaires administered	257	100.0
Valid responses	149	57.9
Non-response	108	42.1

4.3 Reliability

The reliability was tested by internal consistency methods and the results are summarized in Table 4.2. The cut-off points for accepting reliability were 0.7 and the scores for each of the four (4) scales was above this threshold and therefore no adjustments were made to the questionnaire.

Table 4.2: Reliability Statistics

Scales	Cronbach's Alpha	N of Items
Digitalization readiness	0.754	13
Digitalization acceptance	0.910	10
Digitalization diffusion	0.864	9
Enterprise growth	0.929	6

4.4 Background Information

Background information used was on gender, education, and experience of respondents. Sector, number of staff and turnover of enterprises.

4.4.1 Gender of Respondents

Table 4.3 shows that majority of the owner/managers were female (73.2%) while the remaining 26.8% were male suggesting that the industry is female dominated. This outcome is valid as most studies in handicraft enterprises have more female participants than male in Oman (Almamari, 2015), China (Wut et al., 2021), and in Kenya (Matayo et al., 2021).

Table 4.3: Gender Distribution

Gender	Frequency	Percent
Female	109	73.2
Male	40	26.8
Total	**149**	**100.0**

4.4.2 Education Level of Respondents

The findings indicate most respondents accounted for 40.9% of the sample followed by those with diploma (28.1%), postgraduate degree (22.8%), and certificate (8.1%) level of education as illustrated in Table 4.4. The representation of different levels of education among the sample indicates that it does not influence participation in the industry. The entrepreneur spirit in Kenyans motivates them to enter into business despite their educational background.

Table 4.4: Education Level Distribution among Respondents

Education	Frequency	Percent
Certificate	12	8.1
Diploma	42	28.1
Postgraduate Degree	34	22.8
Undergraduate Degree	61	40.9
Total	**149**	**100.0**

4.4.3 Owner/manager Experience

The owners/managers with 2-5 years of experience accounted for 64.4% of the sample followed by those with 6-9 years of experience (16.8%), more than 10 years of experience (10.1%), and less than 1 years of experience as summarized in Table 4.5.

Table 4.5: Owner/manager Experience

Number of years	Frequency	Percent
2 - 5 years	96	64.4
6 - 9 years	25	16.8
Less than 1 year	13	8.7
More than 10 years	15	10.1
Total	**149**	**100.0**

4.4.4 Handicraft Enterprises Subsectors

The handicraft subsectors are shown in Table 4.6 where most enterprises manufactured beads and jewelry representing 26.8% of the sample followed by those textile and clothing that representing 24.2% of the sample followed by weaving (17.5%). Other subsectors reported included leather products (16.8%), wood products (7.4%), Crocheting and knitting (6.6%), and one enterprise produced customized jigsaw puzzles.

Table 4.6: Subsectors Represented in Handicraft Enterprises

Handicraft subsectors	Frequency	Percent
Beads and jewelry	40	26.8
Crocheting and knitting	10	6.6
Customized jigsaw puzzles	1	0.7
Leather products	25	16.8
Textile and clothing	36	24.2
Weaving	26	17.5
Wood products	11	7.4
Total	**149**	**100**

4.4.5 Number of Staff in Enterprises

The majority of enterprises had less than 5 employees representing 70.5%, those with 10-49 employees represented for 22.5% of the sample while 4.0 % had 50 to 249 employees as Table 4.7 shows. The findings suggest that most of the enterprises were micro enterprises (MEs) followed by small firms and medium firms represent the landscape of handicraft enterprises in Nairobi County. define SME as micro if it has 1-9 employees and an annual turnover of less than KES.500,000 (Matayo et al., 2023).

Table 4.7: Number of Staff in Enterprises

Number	Frequency	Percent
10 - 49 staff	38	25.5
50 - 249 staff	6	4.0
Less than 5 staff	105	70.5
Total	**149**	**100.0**

4.4.6 Enterprise Turnover

Table 4.8 indicates that more firms had less than 1 million Kshs annual turnover representing 75.8% of the sample followed by those with turnovers of 1-5 million Kshs (14.8%) and more than 5 million Kshs (9.4%) respectively. According to Matayo et al. (2023) micro enterprises have annual turnover of less than KES. 500,000 and this validates the findings.

Table 4.8: Enterprises Annual Turnovers

Turnover	Frequency	Percent
1 - 5 million Kshs	22	14.8
Less than 1 million Kshs	113	75.8
More than 5 million Kshs	14	9.4
Total	**149**	**100.0**

4.5 Enterprise Growth

Table 4.9 shows the perceptions of respondents on the influence of digitalization on their growth and sales was ranked highest (M=4.57, SD=0.618) followed by profitability (M=4.30, SD=0.634), market share (M=4.11, SD=0.818), turnover (M=4.04, SD=0.929), investments (M=3.67, SD=1.124). This implies respondents perceived that digitalization in

handicraft enterprises would contribute to growth in sales, profits, market share, and turnover to a great extent. The respondents indicated that digitalization would contribute to their investment growth to a moderate extent.

Table 4.9: Growth of Handicraft Enterprises

To what extent does digitalization contribute to…	Mean	Std. Deviation
Turnover of the enterprise	4.04	0.929
Investments into the enterprise	3.81	0.783
Employment opportunities in the enterprise	3.67	1.124
Sales of the enterprise	4.57	0.618
Market share of the enterprise	4.11	0.818
Profitability of the enterprise	4.30	0.634

4.6 Digitalization Readiness

The mean and standard deviation results for digital readiness among the enterprises are summarized in Table 4.10. The findings indicate respondents were optimistic that digitalization would make their work processes more efficient as shown by mean score 4.68, standard deviation 0.508. In terms of innovativeness, respondents indicated their willingness to use digitalization to assist them in their work as shown by mean score 4.56 and 0.662 standard deviation. In terms of discomfort, the respondents indicated that they did not feel that digitalization would complicate their work as shown by mean score 1.87 and standard deviation 1.254. The respondents were not skeptical of benefits posed by adopting digitalization as shown by mean score 1.97 and 1.185 standard deviation.

Table 4.10: Digitalization readiness mean and standard deviation

Variable	Items	Mean	Std. Deviation
Optimism	Digitalization may be more comfortable to use for some tasks in the enterprise	4.42	0.763
	I would like to use digitalization because it suits the needs of my enterprise	4.42	1.104
	Digitalization would make my work or activities more efficient	4.68	0.508

	Digitalization would provide more freedom at work in my enterprise	4.04	1.196
Innovativeness	I am always looking for more details about digitalization for my enterprise	4.19	1.023
	I can use existing digitalization in the market with no help from others	3.19	1.293
	I am willing to use new digitalization to help work in my enterprise	4.56	0.662
Discomfort	I feel that digitalization will complicate my work	1.87	1.254
	I feel that digitalization is only aimed at people who master the use of digital technologies	2.17	1.276
	I believe more in human work than digitalization in handicraft business	2.63	1.286
Insecurity	I'm worried that digitalization may not be as effective in producing products	2.51	1.374
	I'm skeptical of the benefits digitalization would provide for my enterprise	1.97	1.185
	I prefer to interact with humans compared to using digital technologies	2.45	0.962

4.7 Digitalization Acceptance

Table 4.11 indicates the responses on digitalization acceptance along the two dimensions of perceived usefulness (PU) and perceived ease of use (PEOU). On the concept of PU, digitalization was perceived to improve job performance in handicraft enterprises and indicated by mean score 4.38 and 0.818 standard deviation. The respondents indicated that it was easy for them to become skilled in using digitalization as shown by mean score 4.01 and 0.979 standard deviation indicating their perception of ease of use.

Table 4.11: Digitalization acceptance mean and standard deviation

Variable	Items	Mean	Std. Deviation
Perceived usefuln	Using digitalization would allow me to get tasks done more quickly	4.24	0.794

	Digitalization improves job performance in my enterprise	4.38	0.818
	Digitalization increases my productivity at my enterprise	4.34	0.742
	Digitalization increases my effectiveness at my enterprise	4.23	0.727
	Digitalization makes my job easier	4.23	0.798
Perceived ease of use	Digitalization adoption is easy for me	3.77	0.849
	I would find it easy for digitalization to do what I want it to do in my enterprise	3.81	0.841
	My interaction with digitalization is clear and understandable	3.91	0.833
	I find the interaction with digitalization as flexible	4.03	0.779
	It is easy for me to become skilled in using digitalization in my enterprise	4.01	0.979

4.8 Digitalization Diffusion

The results indicated that respondents were in moderate agreement that adoption of digitalization will be more reliable than the existing technology being used as shown by a mean score of 3.81 and 1.057 standard deviation. In terms of its compatibility, respondents agreed that digitalization has the ability to address the technology needs of the enterprise as shown by mean score 4.23 and 0.896 standard deviation. In terms of its triability, the respondents agreed that they were able to adopt digitalization in a scalable approach as indicated by mean score 4.00 and 1.090 standard deviation. \

In terms of its complexity, the respondents were in agreement that digitalization requires one to develop new skills and understanding as shown by mean score 4.21 and 1.100 standard deviation. In terms of observability, respondents were able to observe what digitalization other enterprises have adopted in their business (M=3.53, SD=1.082) and being able to describe digital technologies adopted by other enterprises to others (M=3.43, SD=1.035).

Table 4.12: Digitalization diffusion mean and standard deviation

Variable	Items	Mean	Std. Deviation
Relative advantage	Digitalization is likely to be more useful than existing techniques I use in my enterprise	3.47	1.094
	Digitalization will provide more convenience than the existing techniques I use in my enterprise	3.79	1.069
	Digitalization will be more reliable in comparison to the present technology; techniques in my enterprise	3.81	1.057
	Digitalization will be better compared to existing technology &; techniques used in my enterprise	3.81	1.074
Compatibility	Digitalization goes against my social-cultural values and beliefs	1.54	0.933
	Digitalization can be a useful addition to my enterprise from my past experiences	4.22	0.796
	Digitalization may address the technological needs of my enterprise	4.23	0.896
Triability	I am able to adopt digitalization in my enterprise in a phased and experimental basis	4.00	1.090
	I am able to re-invent the available digital technologies to fit my enterprise	3.66	1.107
Complexity	Digitalization use for my enterprise is easy to understand	3.73	0.970
	Digitalization requires one to develop new skills and understanding	4.21	1.100
Observability	I have been able to observe what digitalization other enterprises have adopted in their business	3.53	1.082
	I am able to describe digital technologies adopted by other enterprises to others	3.43	1.035

4.9 Correlation Analysis

There were positive and significant associations between all the variables as shown in Table 4.13. the highest correlation coefficient was between digitalization diffusion (r = 0.659, p<0.05) and growth of handicraft enterprises followed by digitalization acceptance (r = 0.538, p<0.05) and digitalization readiness (r = 0.446, p<0.05).

Table 4.13: Correlation coefficients

Variables		Digitalization Readiness	Digitalization acceptance	Digitalization diffusion
Digitalization Readiness	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	149		
Digitalization acceptance	Pearson Correlation	.162*	1	
	Sig. (2-tailed)	0.048		
	N	149	149	
Digitalization diffusion	Pearson Correlation	.442**	.574**	1
	Sig. (2-tailed)	0.000	0.000	
	N	149	149	149
Enterprise Growth	Pearson Correlation	.446**	.538**	.659**
	Sig. (2-tailed)	0.000	0.000	0.000
	N	149	149	149

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

4.10 Regression Analysis

Table 4.14 shows the model accounted for 51.1% of change in growth of handicraft enterprises and this was statistically significant at the 95% confidence level. The diffusion of digitalization (β = 0.411, p < 0.05) was shown to have the largest effect on growth of handicraft enterprises followed by digitalization readiness (β =0.361, p < 0.05), and digitalization acceptance (β = 0.286, p < 0.05) and these effects were statistically significant.

Table 4.14: Regression Output

R	R Square	Adjusted R Square	Std. Error of the Estimate
.715[a]	.511	.501	.43160

ANOVA[a]

	Sum of Squares	df	Mean Square	F	Sig.
Regression	28.246	3	9.415	50.545	.000[b]
Residual	27.010	145	.186		
Total	55.257	148			

Coefficients[a]

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.219	.377		.582	.562
Digitalization Readiness	.361	.106	.223	3.419	.001
Digitalization acceptance	.286	.076	.269	3.759	.000
Digitalization diffusion	.411	.080	.406	5.160	.000

Dependent Variable: Enterprise_Growth

Predictors: (Constant), Digitalization_diffusion, Digitalization_Readiness, Digitalization_acceptance

4.11 Chapter summary

The findings were presented in this chapter and they revealed that there was a positive and significant association among digitalization readiness, acceptance, and diffusion on growth of handicraft enterprises. Further, these variables explained 51.1 % of change on growth of handicraft enterprises while digitalization diffusion had the greatest effect on enterprise growth followed by readiness and acceptance.

CHAPTER FIVE
DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion of its findings where it is compared to empirical review done in chapter two. These discussions are done for each of the objectives and this is also done for the conclusions. The recommendations are made for policy and action and also for future research.

5.3 Discussion

5.3.1 Digitalization Readiness and Growth of Handicraft

The outcome indicated that a positive and significant effect of digitalization readiness on growth of handicraft enterprises was present. Digital readiness was found to have the least effect on handicrafts enterprise growth. Digital readiness refers to the state of organizations being prepared for digitalization (Mansoor et al., 2020). The study adopted Parasuraman (2000) technology readiness (TR) theory that examines propensity of a person's adoption of new technology using the four (4) personality dimensions of insecurity, discomfort, optimism, and innovativeness.

Based on these dimensions, the descriptive data indicated respondents disagreed on the insecurity and discomfort that would be presented by digitalization of the handicraft sector. Further, the respondents were optimistic of the digitalization benefits to their enterprise and also that innovativeness would increase with digitalization of their business. The findings agree with Panday (2018) assertion that innovativeness and optimism are drivers towards technological readiness while insecurity and discomfort will inhibit this readiness (Panday, 2018).

The findings support Tanapaisankit et al. (2024) that an increase in digital readiness contributes to increase in digital usage which was associated with greater likelihood of gaining capital financing that contributed to SME growth. In Ghana, Karanasios et al. (2022) revealed that a link between technology adoption and microenterprise growth. Early adopters of modern technology could increase their annual revenue significantly faster than

their competitors. In Nigeria, Ayegba et al. (2019) found that that technology readiness had a significant positive impact on SME growth.

However, the findings do not support past studies that have found MSMEs were not digital ready to be able to full benefit from digitalization. According to Pingali et al. (2023) found there was a limited understanding of drivers of the digital readiness among MSMEs and this limited the extent to which digitalization may contribute to their growth. In their study, Vaculčíková et al. (2020) found that most enterprises do not have computers in their businesses and this was among the private enterprises, individual entrepreneurs, and cooperatives and this limited their likely benefits from the digitalization.

5.3.2 Digitalization Acceptance and Growth of Handicraft Enterprises

Digitalization acceptance had a positive effect on handicraft enterprises growth and was the second largest effect among the independent variables. The descriptive statistics showed there was agreement with the perceived usefulness (PU) and perceived ease of use (PEOU) of digital technologies available in the handicraft sector. PU is the user subjective likelihood that digital technologies will increase their productivity while PEOU is the degree to which the individual user of an IT system expects it to be free from any efforts (Bonfanti et al., 2023).

Camilleri (2018) found that SME owner PU of digital media to engage with marketplace stakeholders was positive and significant for their enterprise's communication purposes. Similarly, Gekombe et al. (2019) found PEOU had an effect but PU had no effect on social media use intentions among owner-managers. Likewise, Bruce et al. (2023) confirmed a positive and significant relationship between digital marketing use and SMEs' sustainable growth.

The findings support past studies that have established positive outcomes on enterprise growth when MSMEs accept digitalization. Sinkala (2023) research on mobile money revealed association between using money mobile and growth of SMEs by way of improved financial management, wider market share, and operational efficiency. Meher et al. (2021) also found that SMEs that accepted digital banking advantages contributed to SME growth.

Some studies have also found that accepting technologies may not always translate to growth for MSMEs. For instance, Karanasios et al. (2022) research in Ghana found no

effects of digitalization acceptance on MSME growth. This was attributed to the dependence of micro enterprises on 'free use' or 'trial' digital technologies in advertising, communication, operations, and promotion and this thereby hindered their growth due to use restrictions.

5.3.3 Digitalization Diffusion and Growth of Handicraft Enterprises

The analysis indicated that digitalization diffusion had the greatest effect on handicraft enterprises growth and this was statistically significant. The concept of diffusion of innovation (DOI) was a theoretical perspective advanced by Rogers (2003) and is described as whether at group or social level and the behaviour of adopting a technological innovation experienced at the personal level. The DOI is focused on adoption of technological innovation and is not limited to IT. Thus, the findings indicate that behaviour of owners/managers towards adoption of available digital technologies in handicraft enterprises was important for the growth of MSMEs.

This finding corroborates those from Indonesia where Dyah et al. (2017) finding that increasing the rate of technology diffusion results in an increase in SME growth by creating more employment opportunities. Hassan et al. (2024) research findings from Germany confirmed that a higher digital diffusion in an SME resulted in greater innovation and this would contribute to their growth. The results also support those from Zambia where Kakumbi and Phiri (2022) determined that a relationship was present between VT4 variables on adoption of social media and growth of SMEs.

In Kenya, Mararo (2018) found that diffusion of digital banking was positively influential on SME growth. Overall, diffusion of technologies among SMEs is important for the community as a whole. Ozturk et al. (2024) established that SMEs contribution to diffusion of digital technologies within communities was able to be an impetus for environmental changes including promotion of eco-friendly innovations and sustainable practices.

The results contradict past studies that found no relationship was present between ICT diffusion on SME growth. For instance, Azam (2015) determined that using ICTs does not increase SME growth right away and enterprises need to acquire the proper utilization and integration of the particular technology to affect their growth. Rivares et al (2019) found that there was no significant effect of "disruptor" technologies on the productivity growth

of SMEs in hospitality, transport, retail trade. This indicates that the relationship between diffusion of digital technologies may be mediated by the sector in which they operate.

5.4 Conclusion

5.4.1 Digitalization Readiness and Growth of Handicraft enterprises

The first objective assessed digitalization readiness effect on growth of handicraft enterprises in Nairobi City County and found that this variable had the least effect on growth of handicraft enterprises. The study concludes that digitalization readiness had the least effect on growth of handicraft enterprises.

5.4.2 Digitalization Acceptance and Growth of Handicraft Enterprises

The second objective was to assess digitalization acceptance among handicraft enterprises in Nairobi City County. The findings revealed that digital acceptance had the second largest effect on growth of enterprises. Therefore, it is the conclusion of this study that increasing acceptance of digitalization would result in growth of handicraft enterprises.

5.4.3 Digitalization Diffusion and Growth of Handicraft Enterprises

The third objective was to analyse digitalization diffusion on growth of handicraft enterprises in Nairobi City County. The analysis indicated that digitalization diffusion had the greatest effect on handicraft enterprises growth and this was statistically significant. The study therefore concludes that digitalization diffusion is the most important component for achieving growth of handicraft enterprises.

5.5 Recommendations

5.5.1 Digitalization Readiness and Growth of Handicraft Enterprises

The digital readiness of enterprises was measured by its components of optimism, innovativeness, discomfort, and insecurity. The findings indicated respondents exhibited less confidence in their ability to exploit digitalization to be innovative in their enterprise. Therefore, there is need for actors (Ministry of ICT, County Governments, ICT Authority, development partners, and investors and operators) should provide incubator initiatives for digitalization of the handicraft sector to improve their readiness to exploiting emerging digital technologies. This can be achieved by providing financial, human resources, marketing, operational, administrative, and organizational management knowledge and skills.

5.5.2 Digitalization Acceptance and Growth of Handicraft Enterprises

Digital acceptance was measured by perceived usefulness and perceived ease of use, between these two variables, the findings revealed that perceived ease of use was ranked lower. Therefore, it is recommended that MSMEs in the handicraft sector should be provided with support and assistance in making it easier to adapt existing digital technologies in their enterprise. This can be done by creating awareness and sensitization on emerging technologies and how these can be leveraged in the handicraft sector. Moreover, MSMEs are likely to be using 'free service/trial' of digital platforms due to inability to afford the premium services offered. Therefore, actors such as the ICT authority and County Governments to enter into partnerships and agreements with digital technology service providers to enable MSMEs afford these platforms through MSMEs cooperatives and unions.

5.5.3 Digitalization Diffusion and Growth of Handicraft Enterprises

The growth of SMEs was shown to have potential to greatly benefit from diffusion of digitalization. The study therefore recommends for identifying 'early adopter' of digital technologies in the sector and then sharing their experience and information with others. This can be done by exhibitions organized by the national and county governments and other actors. These efforts can translate to exchange of information on available digital technologies and the opportunities they offer for handicraft enterprises and this may lead to 'late adopters' usage of these technologies to enhance their growth. The study also recommends for knowledge transfer activities supported by higher education institutions as important for MSMEs to achieve digital readiness.

5.6 Limitation of the study

Our study encountered a limitation that warrant consideration. During the data collection phase, it became apparent that some of the businesses within our population sample had ceased operations. This phenomenon posed a challenge to the completeness of our dataset and may have influenced the representativeness of our findings.

5.7 Recommendations for Future Research

The exploratory research design provides tentative findings and this means the findings may be improved in a future study and this was a limitation of the study. Secondly, the study was limited to handicraft enterprises that were registered with MSEA in Nairobi City County and therefore there was a chance of excluding those enterprises that have not

registered with the agency. The research examined digitalization and its influence on growth of SMEs in the handicraft sector in Nairobi City County. Yet, there is need for a similar study to be conducted in all the 46 counties. The growth of SMEs was measured by turnover, investments, employment, sales, market share, and profitability. There is need for future research to examine the influence of digitalization on innovation of handicraft enterprises which was a benefit of digital technologies that came up from the discussion of findings.

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APPENDICES

APPENDIX ONE: QUESTIONNAIRE FOR HANDICRAFT ENTERPRISES OWNERS/MANAGERS

Section One: Background Information

1. Gender of enterprise manager/owner

   Male ( ) Female ( )

2. Education level of enterprise manager/owner

   No formal schooling ( )
   Certificate ( )
   Diploma ( )
   Bachelor Degree ( )
   Postgraduate Degree ( )

3. Years in experience of enterprise manager/owner

   Less than 1 year ( )
   2-5 years ( )
   6-9 years ( )
   More than 10 years ( )

4. Subsector of handicraft products

   Weaving ( )
   Wood carvings ( )
   Metal carvings ( )
   Pottery ( )
   Textile ( )
   Beaded jewelry ( )

5. Number of employees

   Less than 5 staff ( )
   10-49 staff ( )
   50-249 Staff ( )

6. What is the approximate annual turnover of the enterprise

   Less than 1 million Kshs. ( )
   1 – 5 million Kshs. ( )
   More than 5 million Kshs ( )

Section Two: Digitalization Readiness

7. The following statements refer to the readiness for digitalization in your enterprise. Please indicate your level of agreement as: 1-Strongly disagree, 2-Disagree, 3-Neutral, 4-Agreement, 5-Strongly agree

Items	**1**	**2**	**3**	**4**	**5**
Optimism					
Digitalization may be more comfortable to use for some tasks in the enterprise					
I would like to use digitalization because it suits the needs of my enterprise					
Digitalization would make my work or activities more efficient					
Digitalization would provide more freedom at work in my enterprise					
Innovativeness					
I am always looking for more details about digitalization for my enterprise					
I can use existing digitalization in the market with no help from others					
I am willing to use new digitalization to help work in my enterprise					
Discomfort					
I feel that digitalization will complicates my work					
I feel that digitalization is only aimed at people who master the use of digital technologies					
I believe more in human work than digitalization in handicraft business					
Insecurity					
I'm worried that digitalization may not be as effective in producing products					
I'm skeptical of the benefits digitalization would provide for my enterprise					

I prefer to interact with humans compared to using digital technologies					

Section Three: Digitalization acceptance

8. The following statements refer to the acceptance of digitalization in your enterprise. Please indicate your level of agreement as: 1-Strongly disagree, 2-Disagree, 3-Neutral, 4-Agreement, 5-Strongly agree

Items	**1**	**2**	**3**	**4**	**5**
Perceived usefulness					
Using digitalization would allow me to get tasks done more quickly					
Digitalization improves job performance in my enterprise					
Digitalization increases my productivity at my enterprise					
Digitalization increases my effectiveness at my enterprise					
Digitalization makes my job easier					
Perceived Ease of Use					
Digitalization adoption is easy for me					
I would find it easy to digitalization to do what I want it to do in my enterprise					
My interaction with digitalization is clear and understandable					
I find the interaction with digitalization as flexible					
It is easy for me to become skilled in using digitalization in my enterprise					

Section Four: Digitalization diffusion

10. The following statements refer to the diffusion of digitalization in your enterprise. Please indicate your level of agreement as: 1-Strongly disagree, 2-Disagree, 3-Neutral, 4-Agreement, 5-Strongly agree

Items	**1**	**2**	**3**	**4**	**5**
Relative advantage					

Digitalization is likely to be more useful than existing technology I use in my enterprise					
Digitalization will provide more convenience than the technology I use in my enterprise					
Digitalization will be more reliable in comparison to the present technology in my enterprise					
Digitalization will be better compared to existing technology used in my enterprise					
Compatibility					
Digitalization goes against my social-cultural values and beliefs					
Digitalization can be a useful addition to my enterprise from my past experiences					
Digitalization may address the technological needs of my enterprise					
Trialability					
I am able to adopt digitalization in my enterprise in a phased and experimental basis					
I am able to re-invent the available digitalization to fit my enterprise					
Complexity					
Digitalization use for my enterprise is easy to understand					
Digitalization requires one to develop new skills and understanding					
Observability					
I have been able to observe what digitalization other enterprises have adopted in their business					
I am able to describe digitalization adopted by other enterprises to others					

Section Five: Growth of Handicraft Industry

11. The following items are indicators for growth in the handicraft industry growth and you are asked to indicate to what extent digitalization would be helpful using the following

criteria: 1- Not at all helpful, 2- Not so helpful, 3-Somewhat helpful, 4-Very helpful, 5-Extremely helpful

Items		**1**	**2**	**3**	**4**	**5**
a)	Turnover					
b)	Investments					
c)	Employment					
d)	Sales					
e)	Market share					
f)	Profitability					

APPENDIX TWO: ETHICAL APPROVAL

Strathmore UNIVERSITY

26th April 2024

Ms Kariuki Pauline,
pauline.kariuki@strathmore.edu

Dear Ms Kariuki,

RE: Digitalization Factors Influence on Enterprise Growth among Handicraft Enterprises in Nairobi City County, Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC2190/24.** The approval period is from **26th April 2024 to 25th April 2025.**
This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
v. Clearance for the export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) https://research-portal.nacosti.go.ke/ and obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

STRATHMORE UNIVERSITY INSTITUTIONAL SCIENTIFIC AND ETHICAL REVIEW COMMITTEE
(SU-ISERC)
26-Apr-2024
Email:ethicsreview@strathmore.edu
P.O BOX 59857-00200
NAIROBI-KENYA

APPENDIX THREE: LETTER OF INTRODUCTION

Ole Sangale Rd, Madaraka Estate
P. O Box 59857 - 00200, Nairobi, Kenya.
Cell: +254 703 034 414/6/7, Twitter: @SBSKenya
Facebook/Linkedin: Strathmore Business School

Email: **info@sbs.ac.ke** or visit **www.sbs.strathmore.edu**

Strathmore UNIVERSITY BUSINESS SCHOOL

Tuesday, May 7, 2024

To Whom It May Concern,

RE: FACILITATION OF RESEARCH – PAULINE WATHERI KARIUKI.

This is to introduce Pauline Watheri Kariuki, a Master of Business Administration student at Strathmore University Business School, admission number MBA\135613\20 As part of our MBA Program, Pauline is expected to do applied research and undertake a project. This partially fulfills the requirements of the MBA course; to this effect, she would like to request appropriate data from your organization.

Pauline is undertaking a research paper on "***Digitalization Factors Influence on Enterprise Growth Among Handicraft Enterprises in Nairobi City County, Kenya.***" The information obtained shall be treated confidentially and used for academic purposes only.

Our MBA Program seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to the industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and practical value to your organization.

We appreciate your support and will be willing to provide further information if required.

Yours sincerely,

Alois Njenga.
Manager – Graduate Programs

Strathmore University Business School is a Proud member of:

Association of African Business Schools AABS EFMD AACSB

APPENDIX FOUR: RESEARCH PERMIT

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **115608**

Date of Issue: **22/May/2024**

RESEARCH LICENSE

This is to Certify that Ms.. Pauline Watheri Kariuki of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: DIGITALIZATION FACTORS INFLUENCE ON ENTERPRISE GROWTH AMONG HANDICRAFT ENTERPRISES IN NAIROBI CITY COUNTY, KENYA for the period ending : 22/May/2025.

License No: **NACOSTI/P/24/35310**

115608

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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