

UNIVERSITY OF CAPE COAST

DIGITAL ENTREPRENEURSHIP, INTELLECTUAL CAPITAL AND
WELL-BEING OF OWNER-MANAGERS OF SMALL AND MEDIUM-
SIZED ENTERPRISES IN THE GREATER ACCRA REGION OF GHANA



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College of Humanities and Legal Studies, University of Cape Coast, in partial
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Business Administration

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the outcome of my independent and original research, and that none of its contents have been previously submitted for the purpose of obtaining another degree, either inside this university or elsewhere.

Candidate's Signature Date:

Name: Sena Esi Govina

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

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Co- Supervisor's Signature Date:

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ABSTRACT

The relationship between digital entrepreneurship and the well-being of owner-managers remains uncertain, especially for small and medium-sized enterprises (SMEs) in developing economies like Ghana. The study examined the effect of digital entrepreneurship on the well-being of owner-managers of SMEs. It further examined the mediating role of intellectual capital on this nexus. The research employed a post-positivist perspective, utilising a quantitative research methodology and an explanatory research design. To facilitate the collection of data, a standardised, self-administered questionnaire was employed. The study utilised the simple random sampling technique to select 385 respondents from the Greater Accra region of Ghana. The data were analysed using partial least squares structural equation modelling. Results revealed that digital entrepreneurship and intellectual capital had a significant positive effect on the well-being of owner-managers. Also, intellectual capital positively mediates the link between digital entrepreneurship and well-being of owner-managers. The study concludes that digital entrepreneurship offers possibilities to improve the well-being of owner-managers. In addition, the effective management of intellectual capital, can improve the well-being of owner-managers of SMEs. The study therefore recommended that SMEs owner-managers should develop their skills and knowledge in the use and integration of current digital technologies in their business processes and effectively manage intellectual capital to benefit from the immense transformation that it brings to business operations and consequently improve their well-being.

KEY WORDS

Digital creativity

Digital entrepreneurship

Digital knowledge

Digital leadership

Digitalization

Financial well-being

Human capital

Intellectual capital

Non-financial well-being

Organisational capital

Owner-managers

Small and medium-sized enterprise

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DEDICATION

To my late father of blessed memory, Mr. James Kofi Ahiaboo.

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LIST OF ACRONYMS

4IR	-	Fourth Industrial Revolution
AI	-	Artificial Intelligence
CEO	-	Chief Executive Officer
CFO	-	Chief Financial Officer
CTO	-	Chief Technology Officer
DCV	-	Dynamic Capabilities View
DE	-	Digital Entrepreneurship
ERP	-	Economic Recovery Programme
EWB	-	Emotional Well-being
GDP	-	Gross Domestic Product
GEA	-	Ghana Enterprise Agency
GIFEC	-	Ghana Investment Fund for Electronic Communications
GPRSII	-	Growth and Poverty Reduction Strategy II
GSS	-	Ghana Statistical Service
GTZ	-	German Agency for Technical Cooperation
IC	-	Intellectual Capital
ICTs	-	Information and Communication Technologies
IFC	-	International Finance Corporation
IoT	-	Internet of Things
IT	-	Information Technology
JD-R	-	Job Demands-Resources
KBT	-	Knowledge-Based Theory
MSMEs	-	Micro, Small and Medium-Sized Enterprises
NBSSI	-	National Board for Small Scale Industries

NEIP	-	National Entrepreneurship and Innovation Programme
OECD	-	Organisation for Economic Co-operation and Development
PAMSCAD	-	Programme of Action to Mitigate Social Cost of Adjustment
PLS-SEM	-	Partial Least Squares Structural Equation Modeling
PWB	-	Personal Well-being
RBT	-	Resource-Based Theory
RBV	-	Resource-Based View
SDGs	-	Sustainable Development Goals
SDT	-	Self-Determination Theory
SEM	-	Structural Equation Modeling
SMEs	-	Small and Medium Enterprises
STI	-	Schumpeter's Theory of Innovation
SWB	-	Social Well-being
TACT	-	Technology Affordances and Constraints Theory
UN	-	United Nations
UNCTAD	-	United Nations Conference on Trade and Development
VIF	-	Variance Inflation Factor
WB	-	Well-Being

CHAPTER ONE

INTRODUCTION

Globally, the digital revolution has brought about a substantial transformation in the landscape of entrepreneurship, presenting small and medium-sized enterprises (SMEs) with both opportunities and challenges (Nambisan, Wright, & Feldman, 2019). The concept of digital entrepreneurship (DE) has attracted considerable interest among academics and professionals (Turuk, 2021, Yadav et al., 2023). Digital entrepreneurship which employs digital technologies to create or modify business models (Anim-Yeboah et al., 2020), is widely recognized as a critical means for fostering economic growth, enhancing competitiveness and social development of a country. This phenomenon is not merely a trend but a profound shift in the way businesses operate and compete in the modern economy. The success story of SMEs has been a source of great concern to developmental organisations, policymakers and academics due to various factors impacting their performance and sustainability. Well-being of SME owners is pivotal for the growth of SMEs (Msomi & Aliamutu, 2024). since their well-being is closely linked to the success and performance of their businesses (Sarwoko & Nurfarida, 2021). Theoretically, digital entrepreneurship in Ghanaian SMEs can be conceptualised through Schumpeter's idea of creative destruction as a catalyst for innovation. The TACT framework elucidates how digital tools expand business possibilities, while dynamic capabilities and intellectual capital theory illustrate how firms adapt to technological change, leveraging knowledge assets and resources to enhance the success and well-being of owner-managers (Demerouti et al., 2001; Schumpeter, 1911; Teece et al., 1997). In light of this, it is becoming

increasingly important to understand the well-being of SME owner-managers, particularly in the context of digital entrepreneurship. This necessitates a study on the effect of digital entrepreneurship on the well-being of owner-managers of SMEs in Ghana, with a focus on the mediating role of intellectual capital.

Background to the Study

There is a growing awareness that digital entrepreneurship is increasingly recognised as a significant driver of economic growth, job creation, and innovation around the world. The United Nations (UN) has acknowledged the significance of digital entrepreneurship in the pursuit of the Sustainable Development Goals (SDGs) (UN Assembly, 2020). The objective of the UN's E-Commerce and Digital Economy Programme is to improve the capacity of developing countries to participate in and capitalise on digital trade and entrepreneurship (UNCTAD, 2020). This initiative underscores the importance of digital entrepreneurship in promoting innovation, reducing inequalities, and promoting inclusive economic growth. In the same vein, the European Union's Digital Single economy plan, which seeks to unify Europe's digital economy, promotes digital entrepreneurship worldwide. This policy enhances online shopping, digital networks, and digital economy growth (European Commission, 2020). The technique has helped digital startups and older enterprises digitalize.

Across the African continent, a growing number of individuals are embracing digital entrepreneurship. The contribution of digital entrepreneurship to sustainable development in Africa is quite significant. Digital enterprises utilise technology to provide scalable solutions that tackle crucial social and economic problems. For instance, the introduction of mobile

money services such as M-Pesa in Kenya has significantly transformed the concept of financial inclusion by granting millions of individuals who do not have access to traditional banking services the ability to utilise financial services. Not only has this improved personal financial stability, but it has also fostered wider economic endeavours (Suri & Jack, 2016). A twenty percent decrease in poverty rates has been attributed to these digital financial services in nations where they are extensively utilised, according to the World Bank (2021).

In Ghana, digital entrepreneurship is increasingly recognised as a driving force behind sustainable development and economic transformation. The government of Ghana has implemented a variety of policies and interventions in order to encourage digital entrepreneurship in partnership with a variety of stakeholders. The Ghana Digital Roadmap, which was implemented in 2019, is one policy that is particularly noteworthy. This roadmap outlines a comprehensive strategy for digital transformation in a variety of sectors of the economy, such as governance, education, health, and agriculture. The roadmap underscores the importance of fostering an enabling environment for digital enterprises, enhancing digital skills, and developing digital infrastructure (Ministry of Communications, Ghana, 2019).

Moreover, the National Entrepreneurship and Innovation Programme (NEIP) has been a substantial intervention that has been designed to provide support to SMEs and entrepreneurs in Ghana. NEIP specialises in digital enterprises and offers mentorship, training, and funding to young entrepreneurs. This initiative has played a critical role in the development of a new generation of digital entrepreneurs who are responsible for the creation of

jobs and innovation in the country (NEIP, 2021). Additionally, the Ghana Investment Fund for Electronic Communications (GIFEC) plays a key role in reducing the digital divide by supplying digital infrastructure and services to underserved and rural regions. This guarantees that a wider portion of the population has access to digital entrepreneurship opportunities, which promotes inclusive economic growth (GIFEC, 2020).

Accra and Tema Metropolises serve as the primary economic centres of the Greater Accra region, where there is a significant clustering of industrial, commercial, and financial activities. According to the Ghana Statistical Service (GSS) (2022), Greater Accra contributes approximately 25 percent to the national gross domestic product (GDP), highlighting its central role in the country's economy. These metropolises are home to numerous SMEs, which are vital for economic growth. The World Bank (2021) reports that digital startups in Ghana have the potential to create thousands of jobs, directly impacting the livelihoods of many in the Accra and Tema Metropolises.

Digital entrepreneurship applies Schumpeter's Innovation Theory by utilising digital technologies to generate fresh business prospects, challenge established markets, and improve operational effectiveness. Schumpeter highlighted the significance of "creative destruction," which involves the replacement of outdated industries and methods with innovative ones. SMEs can utilise technology such as artificial intelligence, big data, and e-commerce platforms to continuously develop in the digital era (Nambisan, 2017). The continuous introduction of digital technologies, new ideas and improvements can result in significant benefits such as gaining a competitive edge,

expanding into new markets, and achieving higher profitability. These benefits are crucial for the sustained expansion and sustainability of SMEs, which would result in enhanced well-being for the individuals who own and manage them.

According to Azmi (2020), well-being of SME owners is pivotal for the growth of SMEs and important for both entrepreneurs and enterprises. The self-determination theory is being applied more and more to comprehend how management decisions affect worker engagement, motivation, output, and well-being. According to Self-Determination Theory (SDT) (Deci & Ryan, 1985), well-being depends on meeting three psychological needs: autonomy, competence, and relatedness. Feeling in control of one's actions and decisions is autonomy. Entrepreneurship typically meets this demand by allowing SME owner-managers to make independent business decisions (Ryan & Deci, 2000). Satisfying these demands boosts motivation, mental health, and well-being. Applying SDT to the context of digital entrepreneurship highlights how fulfilling these psychological needs can lead to enhanced well-being for SME owner-managers.

Autonomy is facilitated by the ability to manage and supervise the activities of a digital business. Continuous learning and intellectual capital utilisation boost competence. When owner-managers overcome digital problems, they can feel more competent (Deci & Ryan, 2008). Strong digital networks and relationships strengthen relatedness. Competence means feeling successful and capable of completing goals. Relatedness is feeling linked and belonging. SME owner-managers must form and sustain connections with customers, employees, and other stakeholders. Digital platforms improve

communication and engagement, facilitating these linkages. The relationship between SDT and the well-being of entrepreneurs is supported by research. For example, Stephan (2018) discovered that improved mental health and job satisfaction are reported by entrepreneurs who experience higher degrees of autonomy, competence, and relatedness.

In a similar vein, Wiklund et al. (2019) stressed that meeting these psychological needs is essential to preserving entrepreneurs' well-being, particularly in high-stress situations. A thorough foundation for comprehending the well-being of SME owner-managers in the field of digital entrepreneurship is offered by self-determination theory. Through emphasising the significance of relatedness, competence, and autonomy, Self-Determination Theory (SDT) highlights the crucial role that psychological needs play in promoting mental health and general well-being. This theoretical perspective aligns well with the focus on intellectual capital (IC) and its influence on the well-being of digital entrepreneurs.

SME owners-managers' ability to fully participate in digital entrepreneurship is contingent upon intellectual capital management. Intellectual capital, a firm's intangible resources, enables SMEs to innovate and respond to market changes through knowledge, skills, and networks, making it crucial to digital entrepreneurship success. Leveraging intellectual capital in decision-making and problem-solving can increase organisational efficiency, innovation, and sustainability, benefiting SME owners (Muda & Rahman, 2019; Sulastri, Fitria, & Andriani, 2020). In addition, Faisol, Sari and Suharyono (2021) posits that intellectual capital is acknowledged as a vital resource for SMEs to succeed and endure, highlighting its capacity to improve

performance and potentially influencing the owners' well-being. The theory of intellectual capital emphasizes the importance of intangible assets like knowledge, skills, relationships, and processes to the sustainable competitive advantage and long-term value creation of firms.

This study posits that intellectual capital—comprising human, structural, and relational capital—serves as a pivotal mediating factor that enhances the ability of SME owner-managers to navigate the complexities of digital entrepreneurship, thereby improving their overall well-being and business performance in Ghana's growing digital economy.

Internationally, SMEs are instrumental in the development of global economic growth, employment creation, innovation, and wealth, in addition to making substantial contributions to the well-being of their owners. SMEs constitute more than 90 percent of firms and contribute to 50-60 percent of global employment, highlighting their crucial role in generating jobs and ensuring economic stability (World Bank, 2021). These businesses are frequently leading the way in innovation, by developing novel products and services that stimulate competition and economic vitality. Moreover, SMEs play a key role in generating wealth by promoting a culture of entrepreneurship and offering avenues for generating revenue and achieving social advancement. The economic success of SMEs directly influences the well-being of their owners, offering financial independence, personal satisfaction, and a sense of accomplishment

According to Prasanna, Shihadeh and Jayasundara (2019), SMEs are acknowledged as a catalyst for sustainable economic development in both developed and developing nations, underscoring the importance of SMEs in

promoting economic growth and development. In order to demonstrate the role that technology plays in SMEs' contribution to economic development, Kannabiran & Dharmalingam (2012) emphasise the significance of Information Technology (IT) in enabling SMEs to integrate with both domestic and international customers and suppliers.

Across the African continent, SMEs play a pivotal role in driving economic growth, job creation, innovation, and wealth creation. SMEs are significant contributors to GDP as engines of economic development, with some estimates indicating that they account for up to 60 percent of employment and 40 percent of GDP in emergent economies (World Bank, 2021). Enaifoghe, (2023) highlighted the crucial role that the SME sector plays in the South African economy in promoting sustainable development, emphasizing the significance of SMEs in driving economic growth and development. Achieng and Malatji (2022) underscore the potential of digital technologies to improve the well-being of SME owners, contribute to economic development, and increase the productivity and growth of SMEs. The success and sustainability of SMEs in Ghana are intricately linked to the well-being of their owners and managers.

SMEs have over the years, been of critical importance to the economic growth of most developing countries, especially Ghana (Adjabeng & Osei, 2022). SMEs in Ghana are vital contributors to the economy, providing approximately 85 percents of manufacturing employment, contributing about 70 percent to Ghana's GDP, and accounting for over 90 percent of businesses (Ghana Statistical Service, 2022). These enterprises are essential for job creation, innovation, and wealth generation, but their success and

sustainability heavily depend on the well-being of their owners and managers. This is a dominant form of commercial activity, a significant source of employment, and has a beneficial influence on the rate of economic expansion and development in Ghana. Over 70 percent of Ghana's GDP is accounted for by micro, small and medium-sized enterprises (MSMEs). Many economies, particularly those in emerging nations like Ghana, rely heavily on SMEs.

According to Awawdeh, Abulaila, Alshanty and Alzoubi (2022), digital entrepreneurship enables organisations to concentrate their vision and priorities in response to environmental changes. Recent studies indicate that digital entrepreneurship boosts the competitiveness, performance, productivity, sustainable development and well-being of SMEs (Cussen & Cooney, 2019; Zahra, 2021). There has been a growing interest in both academic research and industry practice in the situations and motives that make digital entrepreneurship possible (Friederici, Graham, & Wahome, 2020; Sahut, Iandoli & Teulon, 2021; Kollmann, Kleine-Stegemann, de Cruppe & Then-Bergh, 2022; Zhai, Yang, Chen, Len, Yu & Jin, 2022). However, the nature of well-being in relation to digital entrepreneurship is still unclear. According to Anwar & Daniel (2016), digital entrepreneurship comprises three primary processes: the digital creativity process, the digital leadership process, and the digital knowledge process, which involve selecting the most appropriate alternatives to management trends.

In the context of the discourse surrounding digital entrepreneurship and well-being, the concept of intellectual capital assumes significance as a pivotal element that has the potential to mediate this association. The concept of intellectual capital refers to intangible resources held by an organisation or

individual, including knowledge, skills, and capacities related to creativity. In the domain of digital entrepreneurship, the significance of intellectual capital is heightened as it embodies the capacity of SME owner-managers to proficiently harness digital technology. The presence of intellectual capital is crucial for the enhancement and advancement of organisational skills, encompassing resources and knowledge, which contribute to generating value for the firm and enhancing its efficiency and effectiveness (Hosnavi & Ramezan, 2011).

According to Helms (2021), the author posits that the attainment of organisational success is contingent upon the presence and effective utilisation of intangible organisational resources, such as skills and intellectual capital.

It is against this backdrop, that it is imperative to examine the way intellectual capital and digital entrepreneurship intersect, thereby impacting the wellbeing of SME owner-managers. Considering the importance of SMEs welfare, it is important to expand the scope of the present research on digital entrepreneurship. It was against this backdrop that this study sought to examine the extent to which intellectual capital (IC) mediates the relationship between digital entrepreneurship (DE) and the quality of well-being of owner-managers of SMEs in the Accra and Tema Metropolis in Ghana.

Statement of the Problem

While the SME sector in Ghana makes a substantial contribution to GDP growth, job creation, wealth etc., very little is known about how SMEs that participate in DE improve the owners' and/or managers' well-being. There are critical issues with digital technology adoption that show why these owners do not fully participate in digital entrepreneurship to improve the

entrepreneurial process in emerging markets (Kraus et al., 2021; Nambisan et al., 2019). Ghana's digital entrepreneurship ecosystem is developing, giving SMEs possibilities to expand and innovate. However, this rapid expansion raises concerns about SME owner-managers' financial, mental, and physical well-being, as they face many challenges. According to Camilleri, 2019, SME owner-managers may experience stress and difficulties due to the need to stay updated with technological breakthroughs and the changing landscape of digital communication. For SMEs, particularly those in emerging economies like Ghana, the use of advanced digital technologies, like financial management systems and digital marketing channels, can be daunting, particularly if they are not fully aware of the fundamental shifts that these technologies bring about (Gosal, 2023). SME owner-managers may feel stressed out due to the demands of using digital technologies for a variety of business operations and the necessity to manage the complexities of digital entrepreneurship (Gosal, 2023).

Hernández-Perlins et al. (2021) observed that digital entrepreneurs often feel pressure to innovate constantly, which can cause stress and burnout. Digital businesses' requirement to be continuously connected and available adds to this stress, making it hard for entrepreneurs to reconcile work and life. The digital environment is characterised by rapid change and uncertainty, which can create pressure and strain among entrepreneurs (Menzies et al., 2018). SME owners and managers may be apprehensive about modifying their established business practices and processes due to the uncertainties and potential disruptions that are associated with digital transformation. Basly & Hammouda (2020) assert that SMEs choose stability due to limited resources,

risk aversion, and a focus on current activities. These contrast with the digital world's emphasis on quick change, flexibility, and agility. Resistance to change may stem from a lack of understanding of digital technology's benefits or past unfavourable experiences. Kusi-Sarpong et al. (2021) note that organisational cultural resistance can hinder implementation of digital technologies in business processes.

Participating in digital entrepreneurship can create financial insecurity, which can adversely affect the well-being of SME owners (Birley & Westhead, 1990). SMEs often operate on tight budgets, making these financial commitments particularly stressful. This can negatively affect the overall well-being of SME owner-managers. SMEs also struggle with embracing new technology due to financial constraints. Many SMEs may find digital tools, software, and infrastructure excessively expensive. Additional costs for maintenance, updates, and training strain limited funds. According to the International Finance Corporation (IFC, 2021), financial constraints hinder SMEs' digital transformation in underdeveloped economies like Ghana. The high cost of capital and stringent loan conditions places immense financial strain on SME owners, intensifying stress and affecting their overall well-being.

A significant challenge to SMEs' pursuit of digital entrepreneurship is the deficiency of digital skills and expertise among SME owners and their employees. The International Finance Corporation (2021) found that many SMEs in developing economies, notably Africa, lack the skills and understanding to use digital technologies. The survey found that 40 percent of SMEs cite a lack of awareness of how digital technologies might assist their

firm as a barrier to pursuing digital entrepreneurship. SME growth is limited by this knowledge gap, which stops them from implementing digital solutions. Competence in digital marketing, data analytics, and cybersecurity is essential for success in digital entrepreneurship. Nevertheless, SME owners and managers lack these important digital capabilities, which can hinder them from effectively using contemporary technologies. According to Boateng et al. (2020), the digital skill gap poses a major obstacle to effectively implementing digital strategies SMEs.

The underutilization of intellectual capital is a significant barrier that prevents SME owners and managers from effectively participating in digital entrepreneurship. Intellectual capital plays a pivotal role in the success story of SMEs. IC is a firms' intangible resources – which comprises human, organisational and relational capital. Helms (2021) argues that organisational success depends on intangible resources like skills and intellectual capital. Intellectual capital increases enterprise value leading to increased well-being of SMEs (Tjahjadi et. al., 2024; Bai, 2023) and improves firms' competitive advantage and performance (Hevi et. al., 2023; Boateng et.al., 2020).

Intellectual capital theory's primary management insight is that assets and liabilities do not adequately measure a company's value. Instead, it emphasises intangible assets like knowledge, skills, relationships, and processes, which drive a company's success but are rarely listed on the balance sheet. Effectively managing and utilising these intangible assets can give organisations a sustainable competitive edge and long-term value, according to intellectual capital theory.

Despite the numerous benefits of pursuing digital entrepreneurship, Ghanaian SME owners and managers continue to struggle to grasp and implement digital solutions (Asante Boakye et al., 2023; Samara, & Terzian, 2021) hence keeping up with the rapid technological changes (Popa, Soto-Acosta, & Palacios-Marqués, 2022; Akpan & Ibidunni, 2021) poses a great challenge to their business growth and general well-being. Despite the significant contribution of the SME sector to Ghana's economy, there is an insufficient level of understanding of the role of intellectual capital in the link between digital entrepreneurial activities on the well-being of SME owner-managers specifically in Ghana.

A review of the extant literature suggests that, while most researchers focused primarily on business outcomes such as firm profitability or financial performance (Bartolacci, Caputo, & Soverchia, 2020; Blahova, Palka, & Haghirian, 2017; Guo et al., 2020; Shvachych, & Kholod, 2017), only a few delved into the digital entrepreneurship and owner-managers financial well-being relationship (Thurik et al., 2024; Zeike et al., 2019) overlooking the non-financial – life satisfaction, quality of life, self-actualization- aspect of the well-being of the owner. Additionally, it seems from the preliminary search of literature that empirical studies addressing the mediating role of intellectual capital on the relationship between digital entrepreneurship and SME owner-manager well-being is limited (Bryl, & Bryukhovetsky, 2022). The few closely related studies in this area used human capital as a mediating factor ignoring the other intellectual capital dimensions of relational and organisational capital (Muafi et al., 2021; Muzanenhamo & Rankhumise, 2022; Sahrah et al., 2023). One of the main issues to be addressed by this

current study is to provide a holistic assessment on how digital entrepreneurship contributes to the overall well-being of SME owner-manager as well as the mediating role of intellectual capital in this relationship.

Research on digital entrepreneurship continues to gain prominence as digital innovations advance (Cavallo, Ghezzi, Dell’Era, & Pellizzoni, 2019; Nambisan, 2017; Srinivasan & Venkatraman, 2018). Dana, Salamzadeh, Hadizadeh, Heydari, & Shamsoddin (2022) indicated that, even though the effects of digital technologies on entrepreneurship can be predicted and theorised, there has been little research on digital entrepreneurship in Sub-Saharan Africa. Digital entrepreneurship research is an evolving area of academic research in Africa (Kraus et al., 2021). The term “digital entrepreneurship” refers to the practice of seeking out and seizing business opportunities by making use of digital technologies and/or digital business concepts (Soltanifar, Hughes, & Göcke, 2021). A “digital” or “online” entrepreneur refers to entrepreneurs whose traditional operations have been digitised and digitalized (Ashraf et al., 2021). Digital entrepreneurship involves altering some or all of an enterprise’s activities, processes, and operations to move an asset, service, or substantial portion of the business into digital form (Hull et al., 2007; Le Dinh et al., 2018). This form of entrepreneurship has become increasingly relevant in the context of SMEs as it offers numerous opportunities for growth and expansion. Therefore, the objective of digital entrepreneurship is to alter the corporate environment through the application of digital innovations. Anim-Yeboah et al. (2020) also posit that the capabilities and capacities of business enterprises, as well as the

strategies for deploying digital entrepreneurship, are important themes that have not gained much research attention and investment.

There is an evolving body of research that explores the connection between entrepreneurship and well-being, based on the awareness that people become entrepreneurs for many reasons beyond financial gain alone (Lanivich et al., 2021; Abreu et al., 2019). According to Tvedten et al. (2014) and Ratten and Jones (2018), entrepreneurship is a solution to the economic and social issues in many areas of Africa, as it improves the quality of life, fosters the development of communities, and inspires them to achieve industrial growth. For SME owner-managers, whose roles demand substantial dedication and responsibility, their well-being can significantly influence the performance and longevity of their businesses. Much of the research in the field of well-being studies focuses on subjective well-being, particularly in measuring quality of life (i.e., the knowledge gap). According to Ryan and Deci (2001), well-being can be defined as the fulfilment of pleasure and the avoidance of pain. Happiness and well-being are valued in all aspects of life, which affect mental and physical health in and out of work (Fisher, 2014). Well-being is a key outcome of engaging in entrepreneurship (Abreu, et al., 2019), yet it is unclear how to move from self-employment to well-being. The working environment today is continually evolving and presenting new challenges to managers because of increased digitalization and digitization (Zeike et al., 2019). The recent COVID-19 pandemic posed a threat to the well-being of SMEs and owners, whose firms are intrinsic to their identities and whose failure might result in negative emotions.

Nonetheless, African businesses have not completely tapped into the wealth- and job-creating potential of basic digital technologies like email, the internet, and mobile money (Cariolle & Carroll, 2020). The spread of digital technologies within and between enterprises has resulted in a variety of revolutions in how firms, sectors, and socio-economic interactions are shaped (Marsh, Rincon, Vecchi, Venturini, & 2017). Studies on the complex linkages between entrepreneurship and well-being as outcomes in entrepreneurial settings are making significant contributions to the discourse (Abreu et al., 2018; Bjørnskov & Foss, 2020; Shir, Nikolaev, & Wincent, 2019; Uy, Foo, & Song, 2012). Recently, researchers have acknowledged the necessity of considering the factors affecting entrepreneurs' well-being (Xu & Jin, 2022).

The rising concern from industry, policymakers, and researchers about the low adoption rate of developing digital technologies for increased innovation performance indicates that the support of management and their knowledge of digital tools will impact the successful execution of firm strategies (Yousaf et al., 2021; Türkeş et al., 2021; Afonasova, Panfilova, Galichkina, & Lusarczyk, 2019; Yousaf et al., 2021). Zeike et al. (2019) assert that to maximise value, SMEs must implement the most robust rules for implementing digital technology, which can improve both the well-being of managers and overall firm performance. So far, the potential of digital entrepreneurship to improve the well-being of SME owners has received less attention from researchers in developing nations (Reuschke et al., 2022). Rather, researchers have prioritized the essentials of digitalization and the adoption of technology as crucial components of a viable competitive pathway for continued entrepreneurial development (Akpan, Udoh, & Adebisi, 2022).

Additional works have demonstrated how a company's innovative potential increases when it integrates technology and digital processes (Nguyen, 2018; Peltier, Zhao, & Schibrowsky, 2012). Expatriates with expertise in cutting-edge technology frequently serve to transfer technology to developing nations (Nazareno, Zhou, & You, 2019). Nevertheless, technological change in these economies continues to be understated, particularly in the context of small firms and because of their limited access to resources (Akpan & Ibidunni, 2021).

Integrating comprehensive digital transformation, for instance, AI and robots into corporate processes, is quickly becoming the norm in the global business sector (Akpan & Ibidunni, 2021); specifically, with the commercialization of advanced technologies, the fourth industrial revolution (4IR) is here to stay (Akpan et al., 2022). According to Morgan (2019), many developed economies have employed digital transformation as a method for enhancing the operations and efficiencies of public sector businesses. The trajectory of developing economies demonstrates a level of knowledge about the necessity of digital transformation but not much effort towards implementation (Akpan et al., 2022). Countries with enterprising individuals working to incorporate digital technologies often face barriers from the system itself. Additionally, in light of the global COVID-19 pandemic, recent studies by Stephan et al. (2022) indicate that many of the impediments to the adoption of digital innovations (such as a lack of skills, access to capital, and ineffective networks) still persist in the external business environment, and more specifically, in developing economies like Ghana.

Earlier studies on digital entrepreneurship have focused on high-growth entrepreneurs or knowledge-intensive companies (Quaye & Mensah, 2019), this study aims to shed light on large and rapidly expanding SMEs whose prospects have received limited research attention. Analysing the relationship between digital entrepreneurship, its three distinct dimensions (digital leadership, digital knowledge and digital creativity), well-being (financial well-being and non-financial well-being) and all the dimensions of intellectual capital (human capital, organisational capital and relational capital) in a single model is novel indeed since it can provide insight into the contribution of digital entrepreneurship to economic and social development of a country. Although there is a growing body of literature, studies have not yet fully explored the relationship between digital entrepreneurship and the well-being of owner/managers of SMEs. Additionally, empirical works on intellectual capital acting as a mediator in the nexus of digital entrepreneurship and well-being is limited in the Ghanaian context. In the light of these revealing theoretical and empirical gaps, this study sought to assess the mediating role of intellectual capital in the relationship between digital entrepreneurship and well-being of SME owner-managers in the Greater Accra region of Ghana.

Purpose of the Study

The study primarily sought to examine the effect of digital entrepreneurship on owner-managers well-being and the mediating role of intellectual capital in the relationship between digital entrepreneurship and well-being of owner-managers of SMEs in the Greater Accra region of Ghana

Objectives of the Study

For digital entrepreneurship and SMEs owner-managers well-being, the objective was to;

- 1a. examine the effect of digital leadership on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.
- 1b. examine the effect of digital knowledge on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.
- 1c. examine the effect of digital creativity on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.

For intellectual capital and SMEs owner-managers well-being, the objective was to;

- 2a. examine the effect of human capital on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.
- 2b. examine the effect of organisational capital on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.
- 2c. examine the effect of relational capital on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.

For the mediating role of intellectual capital on digital entrepreneurship and well-being of SMEs owner-managers, the objective was to;

- 3a. analyse the mediating effect of intellectual capital on the relationship between digital leadership and well-being of owner-managers of SMEs in the Greater Accra region of Ghana.
- 3b. analyse the mediating effect of intellectual capital on the relationship between digital knowledge and well-being of owner-managers of SMEs in the Greater Accra region of Ghana.

3c. analyse the mediating effect of intellectual capital on the relationship between digital creativity and well-being of owner-managers of SMEs in the Greater Accra region of Ghana.

Research Hypotheses

The study focused on the following hypotheses to address the research problem investigated.

Hypothesis 1

Hypothesis 1a: There is a significant effect of digital leadership on the well-being of SME owner-managers.

Hypothesis 1b: There is a significant effect of digital knowledge on the well-being of SME owner-managers.

Hypothesis 1c: There is a significant effect of digital creativity on the well-being of SME owner-managers.

Hypothesis 2

Hypothesis 2a: There is a significant effect of human capital on the well-being of SME owner-managers.

Hypothesis 2b: There is a significant effect of organisational capital on the well-being of SME owner-managers.

Hypothesis 2c: There is a significant effect of intellectual capital on the well-being of SME owner-managers.

Hypothesis 3

Hypothesis 3a: Intellectual capital mediates the relationship between digital leadership and well-being of SME owner-managers.

Hypothesis 3b: Intellectual capital mediates the relationship between digital knowledge and well-being of SME owner-managers.

Hypothesis 3c: Intellectual capital mediates the relationship between digital creativity and well-being of SME owner-managers.

Significance of the Study

The push for SMEs in developing countries to adopt digital solutions has been documented by sufficient studies. The rapid spread of emerging technologies necessitates that academic researchers offer information regarding their adoption and use. Considering the scant research on the subject in developing nations like Ghana, this study contributes to the existing body of knowledge. It makes a preliminary effort to interrogate and chronicle the factors that influence digital entrepreneurship and their effect on the well-being of SME managers. The role of digital entrepreneurship in SME well-being will add to the continuing debates on Ghana's technological transformation agenda and the attainment of SDG 9, which targets industry, innovation, and infrastructure.

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Delimitation

Ghana is divided into various regions. Nevertheless, the Greater Accra region of Ghana is the study's primary emphasis. Using SMEs that are active in the Greater Accra region of Ghana, the study examines the effect of digital entrepreneurship on owner-managers' well-being. The emphasis is on managers and owners of SMEs that are active in Ghana. The study's variables included digital entrepreneurship: digital leadership, digital knowledge and digital creativity; intellectual capital: human, relational and organisational; and well-being. Intellectual capital acted as a mediator and digital entrepreneurship as the independent variable. Once more, the post-positivist philosophical paradigm was adhered to in this study. This paradigm acknowledges the limitations and fallibility of human knowledge while being committed to empirical investigation and the scientific process.

Limitations of the Study

Notwithstanding the substantial contribution of the study, some limitations were identified. The present study utilised a quantitative research methodology, hence highlighting the potential impact of inaccurate representation of the target population on the study's outcomes. The drawback was mitigated by the researcher's implementation of a strict criterion for participant selection, ensuring that only individuals who met the specified sample criteria were included in the study. The research employed a Likert-type scale consisting of close-ended statements, which may restrict the extent of information that participants can supply regarding the primary variable under investigation.

Moreover, the study's conclusions may be influenced by the lack of control over the respondents' environment due to the utilisation of questionnaires. The variability of responses can be attributed to the contextual factors that influenced the respondents at the time of questionnaire administration. Consequently, participants' reactions may be subject to the influence of their present circumstances, thereby impacting the ultimate findings of the study. To mitigate this constraint, the surveys explicitly instructed participants to provide replies that were as truthful and accurate as feasible.

Operational Definition of Key Terms

The study's key concepts are described below:

Digital entrepreneurship: The pursuit of business or economic opportunities by leveraging digital technologies.

Digital leadership: The deliberate utilisation of an organisation's digital resources to attain organisational objectives.

Digital creativity: The integration of technology into the creative process.

Digital knowledge: Refers to a basic level of competency in understanding and using digital tools or digital technologies.

Intellectual capital: The intellectual contributions of individuals that the individuals possess.

Human capital: An organisation's internal resources for problem-solving and cultivating deeper ties with its customers and suppliers.

Structural capital: Structural capital comprises the organisational capacities required to effectively address both internal and external issues.

Relational capital: The organisation's capacity to work closely with its most essential business associates, who share a common goal and vision, and create and sustain trusting relationships.

Well-being: The sense of fulfilment experienced while creating, implementing, growing, and managing an entrepreneurial venture i.e., the owner-managers' or entrepreneurs' satisfaction with life.

Organisation of the Study

The work was organised into seven chapters. Chapter one introduces the study, whereas chapter two presents the literature review. Chapter three focuses on the research methods. The results and discussions are presented in chapters four, five and six. Chapter seven presents the summary, conclusions, and recommendations. The first chapter provides an overview of the study, the problem statement, study objectives and questions, hypothesis developed from the proposed conceptual and the justifications for the study.

The literature review is presented in Chapter two, which includes an exhaustive examination of a plethora of extant works of literature that are relevant to the subject matter. It encompasses the examination of theoretical and conceptual frameworks that establish the objectives and the numerous methodologies employed in the investigation. Additionally, pertinent empirical studies were examined to identify the various gaps that necessitate the development of suitable hypotheses. In the third chapter, the methodology adopted for the data collection and analysis is described. This includes a description of the research design, population, sample, and sampling technique, as well as the statistical tool used for the analyses of the data obtained.

The findings and analyses are outlined in chapters four, five, and six. Furthermore, it contains a report on the validity and reliability assessments of the instruments that were conducted, as well as the response rate of the participants. One of these chapters also contains the demographic profile of the participants, as well as the actual findings in themes that correspond to the research hypotheses. Furthermore, it enables the analysis of the data by establishing a connection between the newly discovered information and the previously obtained results.

Chapter seven presents the summary, conclusions, and recommendations. The summary encompasses the study methodologies and discoveries derived from the existing data. The conclusion also addresses the ramifications that arise from the findings in respect to theories and policy. The recommendations derived from the implications are also outlined in this chapter.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The study examined the effect of digital entrepreneurship on the well-being of owner-managers of SMEs and the mediating role of intellectual capital on the relationship between digital entrepreneurship and SME managers' well-being in Ghana. The goal of this literature review is to theoretically justify the supposed nexus among digital entrepreneurship, well-being, and intellectual capital. The review further seeks to provide an in-depth explanation of the nature and scope of these concepts, empirically examine the existing relationships among these variables of interest based on preceding scholarly works, and finally propose a conceptual framework that guides the study's analytical focus. This section encompasses information regarding the literature review.

Theoretical Review

Scholars (Helms, 2021; Kessler, 2013; Rest, 1994) expound a theory as an ordered collection of assertions that are predicted to be true under specific conditions. In general, theories should include (a) variables, concepts, or constructs that are linked in a structured way; (b) processes that affect people's minds, the economy, society, or other areas; and (d) limits on time, place, or other factors (Helms, 2021; Kessler, 2013). A theory is a set of ideas that provides a structure for describing the underlying assumptions of a subject of research. This present study is anchored on Schumpeter's theory of innovation, Technology affordances and constraints theory (TACT), Dynamic

capabilities, Intellectual capital theory (ICT) and the Job demands – resources (JD-R) model.

Schumpeter's Theory of Innovation

Schumpeter's theory of innovation, expounded by Joseph Schumpeter, an Austrian economist, in 1911, serves as the foundational theoretical underpinning for this present study. Schumpeter's theory of innovation explains the integration of entrepreneurial innovation, such as the utilisation of digital technologies, within enterprises to promote economic development via entrepreneurship. As highlighted by Swedberg (2009), Schumpeter formulated the initial edition of this theory in 1911 during his early career as a progressive economist at the University of Czernowitz in the Austro-Hungarian Empire. This seminal work was subsequently translated into English by Redvers Opie in 1934 under Schumpeter's supervision, further disseminating the theory's influential tenets (Swedberg, 2009).

This theory serves as a theoretical framework to comprehend the transformative impact of entrepreneurial activities on economic development. Schumpeter's theory of innovation posits that economic advancement is propelled by a process of creative destruction facilitated by entrepreneurial innovation (Schumpeter, 1911). Within this theory, entrepreneurs act as agents of change, disrupting prevailing economic structures through the introduction of novel products, processes, or market strategies, thereby leading to the obsolescence of established firms and the emergence of dynamic, innovative entities (Emami Langroodi, 2021). This theory presupposes a dynamic and evolving economic environment characterised by constant technological change and entrepreneurial activity. It further highlights the crucial role of

entrepreneurs as primary contributors to economic development (Emami Langroodi, 2021; Schumpeter, 2003). Schumpeter's theory has left an enduring imprint on the comprehension of innovation's significance in fostering economic growth, exerting a considerable influence on subsequent research in the area of economics and entrepreneurship (Jonsson, 2016).

Schumpeter's (1911) analysis of entrepreneurial dynamics provides a fundamental viewpoint on the relationship between owner-manager traits and the collaborative efforts necessary for innovative enterprises. Schumpeter's identification of social inertia and hedonism as impediments to entrepreneurial risk-taking significantly simplifies the multifaceted incentives underlying individual economic behaviour. According to empirical research, economic and social factors, such as the availability of capital and the stability of the market, often have a bigger impact on preventing people from becoming entrepreneurs (Audretsch et al., 2011; Baumol, 2004; Ghannajeh et al., 2015). In view of this, Schumpeter recommended that entrepreneurs leverage intellectual capital within the entrepreneurial ecosystem to promote digitization of business operations to enhance their overall well-being (Østergaard & Marinova, 2018; Ugalde-Binda et al., 2014). Empirical evidence argue that enterprises thrive on collaboration and knowledge-sharing with innovation frequently emerging from collective efforts rather than solely from top-down directives (Stam, 2015; Munier, 2013). This comprehensive, empirically grounded viewpoint enhances Schumpeter's theory by acknowledging that entrepreneurial success increasingly depends on a decentralized model of intellectual capital, which translates into higher owner-manager well-being.

Schumpeter also described the concept of development as an evolutionary process marked by substantial structural changes propelled predominantly by innovation (Schumpeter, 1911, 1939, 1943). This theory delineates the innovation process into four integral dimensions: invention, innovation, diffusion, and imitation. Central to Schumpeter's analysis is the dynamic entrepreneur, positioned as a pivotal agent in the transformative narrative of economic evolution (Schumpeter & Swedberg, 2021). Within Schumpeter's innovation theory, entrepreneurial endeavours, harnessed from the insights of scientists and inventors, engender novel opportunities for investment, growth, and employment. Contrary to conventional emphasis on the invention phase, Schumpeter assigns greater significance to the diffusion and imitation processes in influencing the economic activities. Notably, the macroeconomic repercussions of fundamental innovations may be inconspicuous in the initial years and often extend over an extended temporal horizon to promote economic development.

Economic development, according to Schumpeter (1911), is a historical process characterised by substantial structural transformations, primarily driven by innovation. His categorization of innovation into five specific types, new products, new production techniques, new markets, new supply sources, and modifications in industry structure, demonstrates a thorough comprehension of innovation's complex function in facilitating economic development (Schumpeter, 1934; McCraw, 2007). This concept highlights that innovation extends beyond technological progress; it also includes organisational and market changes that can disrupt current economic models (Baregheh et al., 2009). Recent studies highlight the significance of

these innovations in cultivating competitive advantages and improving overall economic welfare of entrepreneurs since they allow enterprises to adjust to evolving market conditions and consumer preferences (Kline & Rosenberg, 1986; Østergaard & Marinova, 2018). The interaction among many forms of innovation underscores the importance of entrepreneurs utilizing intellectual capital within their ecosystems to manage challenges and foster sustainable growth (Stam, 2015; Ghannajeh et al., 2022).

In furtherance, Schumpeter posited that the pursuit of profits necessitates innovation, leading to a reconfiguration of the economic system's existing productive resources (Schumpeter, 1959). Schumpeter again noted that innovation is a fundamental driver of competitiveness (Porter & Stern, 1999) and economic dynamics (Elgar, 2007). At the core of Schumpeter's theory is the concept of "creative destruction," a term Schumpeter coined in "Capitalism, Socialism and Democracy" (Schumpeter, 2013, p.83), wherein innovation acts as the epicentre of economic change, perpetuating a continual process of industrial mutation that revolutionises the economic structure by incessantly dismantling the old and creating the new (Schumpeter, 2013).

In the context of the present investigation, Schumpeter's theory of innovation delineates a coherent framework for understanding digitalization of entrepreneurship. It expounds the distinction between inventions and entrepreneurial innovations, suggesting that entrepreneurs not only discern how to utilise inventions but also introduce novel methods of production, new products, and innovative organisational structures through the adoption and application of digital technologies (Emami Langroodi, 2021; Schumpeter & Swedberg, 2021). Consequently, entrepreneurs, specifically owner-managers

who want to drive innovation in their enterprises, improve competitiveness, and adapt to the digital economy, are better positioned to identify new ideas and venture into unexplored domains with the objective of satisfying human needs for profit. This is made possible through the use of digital technologies to transform business operations, models, and entrepreneurial activities.

Schumpeter's theory of innovation posits that entrepreneurial innovations demand a comparable level of intellectual capital as the inventive process itself. This implies that the adoption of digital entrepreneurship is conceived as a mechanism to transform business practices, culture, and customer experiences through the integration of digital technologies, thereby empowering owner-managers to cultivate an entrepreneurial spirit that is propelled by the entrepreneur's ability to utilise their intellectual capital to enhance operational efficiency, create new revenue streams, and provide better value to customers (Nambisan et al., 2019).

This theory further emphasises the importance of technological advancements and highlights the crucial role of entrepreneurs in creating new combinations that lead to both satisfaction and profits. Schumpeter's theory of innovation therefore supports the inclusion of digital entrepreneurship as a core element in entrepreneurial activities. This integration can invariably enhance owner-manager's intellectual capital and technical skills in a bid to have competitive advantage over other enterprises. The emphasis on digital entrepreneurship is seen as crucial in providing entrepreneurs with the necessary technical skills to navigate the complexities of modern business environments to generate more profits, consequently improving their overall well-being.

This, in turn, helps their businesses grow and creates more job opportunities. The theory also suggests that the use of digital tools, platforms and artefacts to innovate business operations helps provide entrepreneurs with the necessary technical skills and knowledge to become innovative entrepreneurs (Nambisan, 2022). In this regard, entrepreneurs can be able to identify opportunities, overcome challenges, and navigate the dynamic process of creative destruction, ultimately contributing to economic growth.

Schumpeter's theory of innovation encountered one major criticism regarding allegations of an exaggerated focus on innovation (Śledzik, 2013). Critics contend that the theory is flawed, asserting that innovation is not the primary driver of economic development, as Schumpeter purportedly posited. These critics argue that economic development hinges not solely on innovation but on a myriad of economic and social factors. Schumpeter's response to this criticism remains unspecified in the literature but Schumpeter conceded that innovation is merely one among numerous factors contributing to cyclical fluctuations in a capitalist economy (Piore, 2007). Despite the extensive criticisms, the theory has significantly influenced the comprehension of economic development and growth through the entrepreneurial lens, with contemporary scholars like Daron Acemoglu, Ufuk Akcigit, Nick Bloom, Chang Tai Hsieh, William Kerr, Pete Klenow, Tor Jakob Klette, and Samuel Kortum actively contributing to its evolution (Aghion, 2018; Piore, 2007). Despite ongoing debates and critiques, some scholars argue that Schumpeter's theory retains relevance in the contemporary global economy with a focus on innovation for economic development (Jonsson, 2016).

Technology Affordances and Constraints Theory

The technology affordances and constraints theory (TACT) represents a significant advancement in contemporary technology theories, addressing limitations inherent in earlier models. The theory as formulated by Ann Majchrzak and Lynne Markus in 2014, explains the utilisation of information systems by individuals and organisations, along with the consequent effects on their performance and societal impact. This theory emphasises the necessity of analysing the dynamic interactions between individuals, organisations, and the technologies they adopt. The focus is to gain understanding of the multifaceted uses and repercussions of information systems. The core tenet of TACT is the examination of these interactions, which provides a comprehensive framework for assessing the link between human and technological elements within organisational contexts (Majchrzak & Markus, 2014).

The integration of technological affordances and constraints through the TACT framework significantly impacts management performance. Majchrzak and Markus (2014) define technological affordances as prospective actions, or the potential activities that an individual or organisation can undertake using a particular technology or information system to achieve specific goals. On the other hand, Majchrzak and Markus (2014) describe technological constraints as barriers that prevent an individual or organisation from achieving their objectives through the use of a technology or system. These concepts are universally recognised as relational, highlighting the potential interactions between people and technology rather than being inherent qualities of either the technology or the individuals and organisations

themselves (Helms, 2021; Kessler, 2013). This perspective is however distinct from technological characteristics and human and organisational features.

A substantial body of research has employed the TACT framework to examine patterns of similarity and divergence in technology usage and outcomes across various contexts, including entrepreneurship (Nambisan, 2017; Nambisan, Wright, & Feldman, 2019; Sutherland & Jarrahi, 2018; Taylor, 2020; Taylor-Wesselink & Teulon, 2022). These studies extensively proffer the critical role of understanding the technological affordances and constraints in shaping management decisions, practices and outcomes.

Majchrzak and Markus (2014) argue that an entrepreneur's use of digital platforms depends on their goals, the capabilities of the platform, and what the entrepreneur considers to be possible within the context of their environment. Inferably, in the context of entrepreneurship, the link between digital platforms, entrepreneurs, and their environment is of utmost importance. Thus, the TACT is able to provide a theoretical lens through which entrepreneurs make decisions about the adoption of technology in business practices to improve enterprise performance. The TACT's underlying philosophy requires an examination of the interactions between entrepreneurs, enterprises, and industry, and the technologies they use. Further, TACT posits that not only must these industry players understand the use of digital tools but must also be able to identify the relationships, interdependencies, and unintended consequences that arise from the interactions. This suggests that the adoption of a specific technology is influenced by the broader context of the entrepreneurial ecosystem, which includes stakeholders such as entrepreneurs, employees, competitors, and the entrepreneurship industry.

In addition, the theory provides a valuable framework for comprehending the limitations entrepreneurs encounter because of the use of digital platforms in their enterprises and how these limitations impact their well-being. Given that entrepreneurs resolve to adopting technology for their enterprises, the benefits thereof positively impact their well-being. Conversely, when they are unable to maneuver the constraints that come with technology adoption, entrepreneurs' well-being is adversely impacted. This lays the basis for understanding digital entrepreneurship in a SME setting, specifically in the study of entrepreneurship (Majchrzak & Markus, 2014).

In furtherance, the TACT is a useful way to look at how information technology affects people's behaviour and the results of enterprises, even though some scholars have argued that the terminology used in the TACT literature is not always clear. Notably, controversies persist surrounding some core concepts and assumptions inherent in the model's framework. Critics argue against the theory's novelty in the context of information technology's impact on human behaviour and organisational goals (Taylor, 2020). Still, Majchrzak and Markus (2014) noted that TACT fixes the problems with theories that are based on simple and fixed ideas about how technology affects people's actions and the results of businesses. This is achieved by incorporating an understanding of the specific features and functionalities of information technology. Interestingly, TACT transcends these constraints by conceptualising affordances and constraints as relational constructs that dynamically link humans and technology.

Dynamic Capabilities

The dynamic capabilities view (DCV) is utilised in this study to provide a link between intellectual capital and digital entrepreneurship variables. The dynamic capabilities approach was propounded by Teece, Pisano, and Shuen (1997) as a means of answering the central question in strategic management: how can businesses obtain and maintain a competitive advantage, particularly in environments characterised by high rates of change (the Schumpeterian world of competitive advantage)? Although the framework may be indefinable from the definitional perspective of different researchers, there are some essential components that must be included in any adequate description. Helfat and Raubitscheck (2018), Helfat and Winter (2011), Teece (2007), and Teece et al. (1997) define dynamic capability as an organisation's ability to create, extend, or modify its means of survival (i.e., its resource base, operational capabilities, or features of its external environment) in the interest of enhanced performance and long-term innovation aimed at generating value for the economy, society, and the environment.

In furtherance, Teece et al. (1997, p. 516) characterised dynamic capabilities as “the organisation's ability to integrate, grow, and reconfigure internal and external competence to handle rapidly changing circumstances.” Hassani and Mosconi (2022) also offer a similar description of the dynamic capabilities view as a framework for understanding how businesses create and sustain a competitive advantage. The scholars expound further that the ability to continuously adjust internal operations and external strategies in response to shifting market demands could be termed dynamic capabilities. The DCV theory conjectured that SMEs could strengthen their capabilities to use digital

technologies appropriately to sense and seize emerging opportunities and then reconfigure their available resources to efficiently navigate volatile, high-velocity business environments (Teece et al., 1997).

Bhatt and Grover (2005) also conceived of dynamic capabilities as an enhancement of organisational learning that gives businesses an edge in the market. The concept of “dynamic capabilities” was also defined by Leonard-Barton (1992, p. 113) as “core capability as the knowledge set that distinguishes and offers a competitive advantage.” In addition to elements like employee skills, technical systems, and managerial systems, including organisational structures and processes, Leonard-Barton (1992) explains that these fundamental capabilities encompass a company’s most important assets. Consequently, competitive intelligence is a process that helps develop pertinent information and knowledge (de Miguel, Martínez, & Montes-Botella, 2022) and may be seen as a dynamic capability (Beaugency, Sakinç, & Talbot, 2015; Rodrigo-Alarcón, García-Villaverde, Ruiz-Ortega, & Parra-Requena).

The taxonomy of dynamic capabilities, according to Helms (2021), consists of three primary clusters of competencies: (1) identification and evaluation of an opportunity (sensing); (2) mobilisation of resources to address an opportunity and capture value from doing so (seizing); and (3) continued renewal (transforming). Sensing, seizing, and transforming are crucial if a business is to survive as markets and technologies evolve. These competencies create a competitive advantage since they are ingrained within the organisation and difficult for competitors to replicate. In other words, competitors find it difficult to reproduce dynamic capabilities because they are based on the

unique qualities of entrepreneurial managers as well as the organisation's time-tested routines and culture (Teece, 2014). Dynamic capabilities allow a business to synchronise its resources, competencies, and other assets profitably in dynamic entrepreneurial environments with opportunities and threats. Figure 1 shows the components of dynamic capabilities in relation to a firm's business model and strategy.

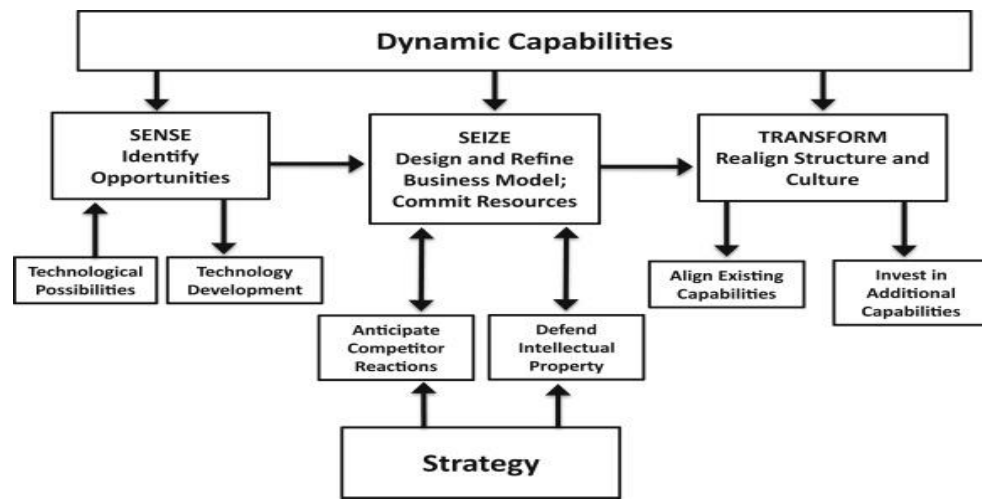


Figure 1: Dynamic Capabilities Framework

Source: Teece, (2007)

The dynamic capabilities framework, a multidisciplinary business model with dynamic capabilities at its core, reflects the interdependence among its components. According to Teece (2018), the framework represents a simplified version of the framework that excludes feedback mechanisms such as those between organisational design and dynamic capacities. Together, dynamic capabilities and strategy establish and refine a sustainable business model that guides the development of an organisation. Ideally, this will result in profits sufficient to enable the company to continue operations and enhance its capabilities and resources. According to Teece (2018), the speed and degree (and associated cost) of aligning a firm's resources, including its

business model(s), with consumer wants and ambitions are dependent on the strength of the firm's dynamic capabilities. In order to accomplish this, businesses need to have a keen awareness of and responsiveness to emerging opportunities, as well as the ability to periodically reshape key elements of their structure and culture in order to better position themselves to take advantage of emerging threats and seize emerging opportunities.

According to Chirumalla (2021), the antecedents to dynamic capabilities are productive tangible and intangible resources and people who may facilitate (or hinder) the creation, maintenance, and actual exercise of dynamic capabilities, and this forms the resource-based view of the organisation; hence, the dynamic capabilities approach is related to the resource-based view (Eriksson, 2014; Schilke, Hu, & Helfat, 2018; Teece, 2014). The resource-based view forms the basis for the dynamic capabilities' framework. To put it simply, a company's resources are its unique, intangible assets that are very hard, if not impossible, to replicate by a rival (Helms, 2021; Kessler, 2013). According to the researchers, a company's assets include its intellectual property, process know-how, customer relationships, and the expertise possessed by teams of exceptionally competent personnel.

Helms (2021) argues that intangible organisational resources like competencies and intellectual capital are crucial for success. The intellectual assets that are the focus of this study are unique in character, making them difficult to trade due to the vagueness of their property rights and the fact that their worth is based on the specific circumstances in which they are used (Helms, 2021). This research is grounded in this framework because it outlines how a business can leverage its resources (intellectual capital) to outperform

its rivals in a dynamic and digital entrepreneurial environment. Further, the dynamic capabilities provide an enterprise with the ability to economically construct and renew resources, assets, and ordinary capabilities while changing them as needed to innovate and respond to (or bring about) changes in the market (Teece, 2018). Managers of big enterprises are likely to feel a strain as a result of this shift, which could have an effect on their well-being.

Intellectual Capital Theory

As a supporting theory, intellectual capital theory is used to elaborate on the SMEs resources. Jon Kenneth Galbraith, an economist, first used the term intellectual capital in 1969. Many scholars, including Khalique, Shaari, and Isa (2013), credit resources-based theory and knowledge-based theory as major inspirations for the development of intellectual capital theory. Though the theory is novel and the research is in its preliminary stages, theoretical foundations have been identified as foundations of intellectual capital (Harris, 2000). Despite the fact that it is in its infancy, the theory has risen to prominence as discussions of knowledge management and human capital have gained prominence in many organisations (Harris, 2000). Knowledge-based theory and resource-based theory are both essential to management. Khalique et al. (2013) argue that intellectual capital theory is an advanced theory that incorporates these two perspectives. Therefore, intellectual capital is essential to the development and improvement of organisational capabilities (resources and knowledge) that produce value for the enterprise and raise its efficiency and effectiveness (Hosnavi & Ramezan, 2011).

The underpinnings of what became known as resource-based theory (RBT) were laid in the 1980s, but it was not until 2009 that Penrose formally

proposed it. The scholar suggested a model for optimising the use of capital, diversification, and output. The last two decades of the 20th century experienced a rise in the resource-based theory of the firm as an alternative to the more conventional product-based or competitive advantage (Harris, 2000; Sveiby, 2001). Extant literature found support for the strength of the resource-based theory to explain a firm's competitive advantages stemming from the use of those resources (Ahmad Zaidi & Othman, 2012; Barney, 1991; Kozlenkova, Samaha, & Palmatier, 2014). According to Diin Fitri, Dahlan and Sukardi (2018), an organisation's resources form the resource-based view of the firm and are grounded in both tangible and intangible resources. The resource-based view (RBV) theory posited that start-up small and SMEs facing a variety of constraints must use their existing resources and opportunities in the most efficient manner possible to achieve the greatest results by utilising modern digital tools (Barney, 2001).

Knowledge-based theory, as a complementary theory to resource-based theory, emphasises the premise that the survival and competitive advantages of organisations depend on their capacity to adapt to environmental demands through the development of knowledge and skills (Yli-Renko, Denoo, & Janakiraman, 2020). According to Kozak (2011), knowledge-based assets play an essential role in the process of value creation. In a knowledge-based economy, an organisation's capabilities are predominately knowledge-based, and managers must recognise which competencies they need to sustain competitive advantages (Barney, 1991; Jafari & Rezaee, 2014; Khalique, 2013). According to Henriques, Proença and Maia (2021), the knowledge-

based view of the company is mostly an extension of the resource-based approach.

The Job Demands – Resources (JD-R) Model

In studying the well-being of enterprise owners or managers, the job demands-resources (JD-R) Model is considered an appropriate theoretical framework that links job demands to job resources and how these dynamics impact the overall well-being of the owners or managers. The JD-R Model, as developed by Demerouti et al. (2001), establishes a nexus between workplace demands and resources and their impact on employee engagement. Llorens et al. (2006) argue that the JD-R model comprehensively explains the influence of job demands and resources on the well-being outcomes of individuals.

The model serves as a multifaceted theoretical framework for understanding critical aspects of the workplace, facilitating the explanation and prediction of numerous work-related outcomes, including stress, burnout, work engagement, work-life balance, employee well-being, organisational commitment, job satisfaction, and productivity (Bakker, 2001). Central to this model are job demands and job resources, which independently and comparatively impact employee well-being, particularly in terms of engagement (Bakker & Demerouti, 2014). Demerouti et al. (2001) define job resources as components that aid in achieving work objectives, mitigating job demands, or fostering personal growth and development, whereas job demands are characterised as job elements necessitating sustained effort, accompanied by physiological and psychological costs.

In context, the availability of job resources, such as digital platforms, artifacts, and other digital tools, significantly enhances work engagement

among entrepreneurs, positively impacting their well-being (Paul et al., 2023; Wang et al., 2023). Thus, facilitating the implementation of digital workflow systems within enterprises via these tools, automate business processes and reduce the reliance on manual business operations. This automation lessens the burden and stress associated with traditional enterprise models, which promotes the well-being of enterprise owners and managers. According to the JD-R model, the onerous tasks inherent in traditional business operations, when devoid of technological applications, escalate job demands on owners and managers, consequently deteriorating their well-being (Bakker & Demerouti, 2014).

As part of the model, the two broad categories encompass various variables, with certain factors such as autonomy, work pressure or conflict, and social support being more pertinent to specific job domains (Bakker & Demerouti, 2014). The JDR model posits that relatively distinct “dual processes” underlie the relationship between job demands and job resources, exerting different effects on the entrepreneur’s well-being (Bakker & Demerouti, 2014; Schaufeli & Bakker, 2004; Hakanen et al., 2006). In particular, job demands mostly cause stress through a “health impairment process” linked to energy and effort use, while job resources mostly encourage work engagement through a motivation process that meets basic psychological needs for autonomy, relatedness, and competence (Bakker & Demerouti, 2014).

The JDR model in this study suggests that the adoption of digital tools can significantly improve the well-being of enterprise owner-managers. Conversely, the absence of such tools increases workload, resulting in

increased stress (Khan, 2022). Hence, increased stress levels often lead to burnout, which negatively impact the overall well-being of the owners or managers. This lacuna, when left unaddressed, may lead to conflict which further compounds the already detrimental effects on their well-being and job satisfaction (Wang et al., 2023).

On the basis of the proposition in the JD-R model, the study argues that challenges with innovation, networking, competition, technology adoption and acceptance influence stress levels. Thus, when entrepreneurs have adequate resources (human, technological, structural, relational, intellectual and financial), they can effectively manage their enterprises, thereby leading to a reduced stress levels and enhanced well-being levels. Similarly, job resources may also reduce the effects of job demands on strain and outcomes in the health impairment process of owners or managers (Bakker, Demerouti, & Euwema, 2005).

Conceptual Review

This section of the literature review explored the nature of Ghanaian SMEs, the concept of digital entrepreneurship, intellectual capital and well-being in order to aid in the comprehension of these ideas as they are applied in the present study. In the same section, a logical presentation and discussion of these concepts were also provided with the sole goal of strengthening their applicability to promoting the quality of the well-being of SMEs managers in Ghana. This review elaborated on the numerous definitions of digital entrepreneurship, intellectual capital and well-being as espoused by experts in the existing literature while clarifying any misconceptions that readers may have encountered.

Nature of Ghanaian Small and Medium-Sized Enterprises

According to data from the Registrar General's Department, around 92 percent of registered enterprises in emerging countries like Ghana are SMEs. These SMEs contribute about 70 percent of the country's gross domestic product (GDP) and represent around 92 percent of businesses in Ghana (Aphu & Adator, 2018). However, the academic literature has extensively debated the question of what constitutes a small or medium-sized business. This category of business has been variously defined by various authors to encompass varying components. This seems to indicate that the difficulty in defining multi-part concepts is not unique to large organisations only; SMEs have the same challenge. With in-depth inferences from a great deal of studies, the number of employees is the most prevalent criterion used to differentiate SMEs. Other criteria include total capital, total assets, annual cash flow or sales, skilled labour, and ownership type (Amarteifio, 2015; Oppong, Owiredun & Churchill, 2014; Sarvari, Chan, Alaeos, Olawumi & Aldaud, 2021). Additionally, the definitions of these enterprises range from those requiring minimal startup capital to those requiring millions of dollars (Adisa, Abdulraheem, & Mordi, 2014). Whichever definition scholars consider appropriate, Shelton, Martek, and Chen (2016) emphasise that SMEs are the cornerstones of economies and will continue to dominate the market in the future.

According to Muriithi (2017), SMEs are the engine that drives global economies and the cornerstone of industrialization for both emerging and established nations. These enterprises account for over 90 percent of firms in both developed and developing nations through job creation, employment, tax

provision, and contribution to gross domestic product (GDP). Similarly, Zide and Jokonya (2022) described SMEs as businesses that are majority owned by one or more persons and that are crucial to the creation of jobs and the expansion of the economy. Benzing and Chu (2012) argue that SMEs are increasingly important because of the crucial roles they play in alleviating poverty, increasing national GDP, and providing employment for the vast majority of the population. According to Muriithi (2017), the importance of this industry lies in its “basic approach” to meeting the needs of the vast majority of Africans by providing them with goods and services at cheap costs, as well as serving as a source of income and employment.

Regarding the employee size of SMEs, despite the fact that Storey (1994) attempts to summarise the danger of using employee size to define the status of a firm by stating that in some sectors, all firms may be considered small, whereas in other sectors there may be no small firms, a number of academics have defined SMEs solely based on employee size. Muriithi (2017) contends that SMEs range from very small micro-businesses owned by one or two people with very sluggish or no growth to rapidly expanding medium businesses with millions of dollars in revenue and the majority employing up to 250 workers. Comparatively, in developing nations, including Africa, a business with more than 100 employees is considered large, while one with one to five employees is considered small. In industrialised nations such as the United States, a business with 499 employees is considered to be of medium size (Levine, 2005). In the literature on SMEs, the most recent consensus definition from multiple studies defines SMEs as having fewer than 250 employees, but extremely small businesses may have fewer than 50

employees, and micro-enterprises have between five and ten employees (Amarteifio, 2015; Muriithi, 2017; Sarvari et al., 2021; Zide & Jokonya, 2022).

Multiple researchers and corporate bodies in Ghana have tried to define and characterise SMEs in clear and precise terms. According to the Capacity Development Centre Ghana (2012), 92 percent of companies registered are micro, small and medium enterprises. Consequently, the Government of Ghana (2003) and the World Bank (2006) assert that SMEs make up 70 percent of all enterprises in Ghana and employ 70 percent of the total workforce. Similarly, Amoah and Amoah (2018) stated that about 92 percent of firms in Ghana are classified as small or medium-sized, contributing over 70 percent of the country's gross domestic product (GDP). Additionally, the Ghana Statistical Service (GSS) has defined SMEs as businesses that, at any given time, employ between 50 and 499 people. Businesses with fewer than six employees are classified as micro-enterprises, those with six to thirty employees are considered small businesses; those with thirty-one to one hundred employees are considered medium businesses; and those with more than one hundred employees are classified as large enterprises (GSS, 2016).

The Ghana Enterprise Agency (GEA), formerly the National Board for Small Scale Industries (NBSSI), on the other hand, defined an SME in terms of both fixed assets and personnel count. SMEs were classified as those with fewer than 50 employees and total assets (excluding land, buildings, and cars) of no more than 10 million Ghanaian cedis. However, there are problems with GEA's definition. The constant depreciation of Ghana's currency in

comparison to the world's most popular trading currencies makes the country's fixed-asset valuation procedure challenging to use in practice, especially when making international comparisons (Dalitso & Peter, 2000). Also, firms were categorised in the Regional Project on Enterprise Development Ghana manufacturing survey report as: (i) microenterprise, with fewer than five employees; (ii) small enterprise, with five to twenty-nine workers; (iii) medium enterprise, with thirty to ninety-nine workers; and (iv) large enterprise, with one hundred or more workers (Peprah, Mensah, & Akosah, 2016). However, Osei, Baah-Nuakoh, Tutu and Sowa (1993, as cited in Peprah et al., 2016) commented on the categorization of small-scale enterprises in Ghana and proposed using an employment cut-off point of thirty to divide businesses into three distinct types. Micro-enterprises employ fewer than six people; very-small enterprises employ between six and nine individuals; and small enterprises employ ten to twenty-nine employees.

Overview of Small and Medium-Sized Enterprises in Ghana

According to Abor and Biekpe's (2006) overview of the development of SMEs in Ghana, the concept of SME promotion has been in existence since 1970; however, nothing about it has changed until recently. Institutions such as the Office of Business Promotion and the current Ghana Enterprise Development Commission (GEDC) were established to support SMEs. The primary goal of the GEDC was to help Ghanaian entrepreneurs break into markets that were previously dominated by international companies. In addition, it included plans to improve the technical capacity and financial stability of small businesses (Kayanula & Quartey, 2000; Muriithi, 2017). Expanded institutional assistance for SMEs has been a result of the Economic

Recovery Programme (ERP), launched in 1983. Within the Ministry of Industry, Science, and Technology, the National Board for Small Scale Industries (NBSSI) was set up to specifically serve the needs of smaller enterprises. The NBSSI launched the Entrepreneurial Development Programme to guide those with business acumen towards self-employment through training and support (Abor & Biekpe, 2006).

However, in 1987, the Ghana Appropriate Technology Industrial Service (GRATIS) opened its doors to the industrial community. Its purpose was to monitor the operations of Intermediate Technology Transfer Units (ITTUs) across the country as they carried out their duties. The goal of GRATIS is to help local, informal businesses improve through the dissemination of relevant technology. ITTUs in the regions are meant to improve the engineering skills of local small businesses by providing services like auto repair. Additionally, they are intended to meet the requirements of sectors outside of engineering (Kayanula & Quartey, 2000). The Ghanaian government also tried to prioritise the growth of SMEs by establishing the Ministry for Private Sector Development, which provided some form of support to these enterprises (Abor & Biekpe, 2006).

The most significant institutional issue dynamic SMEs face, according to Abor and Biekpe (2006), is limited access to external financing. Banks' motivation to invest in expanding this market was dampened by historically restrictive financial regulations like low interest rates and a monopolised banking sector. Financial liberalisation and institutional reform were both necessary to undo the damage caused by these methods (Aryeetey et al., 1994).

Despite their numerous and important presences, Boachie-Mensah and Marfo-Yiadom (2005) reveal that 60 percent of SMEs fail within the first five years of operation. Statistics show that the majority of SMEs fail within the first few months of starting business. Numerous SMEs have had their expansion impeded as a result of this. According to research by Obanda (2011), SMEs are often shut out of public procurement contracts due to the bureaucratic burden of mandated bidding processes as well as their insufficient size and delivery capabilities. Lack of financial and business management capacity is a barrier to SME success, as revealed by Hansen, Kimeria, Ndirangu, Oshry, and Wendle (2012). This can prevent SMEs from gaining access to capital or making the most of the money they do have. When associations complete their training programmes, not even the NBSSI secretariat can afford to lend them money. The Programme of Action to Mitigate Social Cost of Adjustment (PAMSCAD) was the only loan programme open to NBSSI, and its maximum credit amount was three million dollars (Muriithi, 2017).

Anheier and Seibel (1987), Gockel and Akoena (2002), and Frempong (2007) also list a number of challenges other than the ones mentioned earlier. They include a lack of government protection for local businesses, the rise of multinational corporations, the absence of credit for SMEs, insufficient investment in technology and research and development, and so on. These are just some examples of the plethora of obstacles connected with SMEs in Ghana. Despite these aforementioned challenges, SMEs globally aid in lowering unemployment rates and growing national economies (Amarteifio, 2015; Amoah & Amoah, 2018; Abor & Quartey, 2010). For the government's

coffers, it also acts as a source of tax money for servicing the state machinery (Peprah et al., 2016; Muriithi, 2017).

In terms of SME financing, the government and donor agencies have established a number of schemes available to the SME sector, such as the Private Enterprises and Export Development Fund, the Export Development and Investment Fund, the German Agency for Technical Cooperation (GTZ), the Business Assistance Fund, the Ghana Investment Fund, the Trade and Investment Programme, the Africa Project Development Facility, the Support for Private Enterprise Expansion and Development, and the Private Enterprises and Export Development Fund. Despite these advancements, the lack of financing continues to be a significant barrier to the growth of SMEs in Ghana (Amarteifio, 2015; Peprah et al., 2016).

SMEs in Ghana, as in most nations, engage in a wide variety of formal and informal economic activities, including retail, wholesale, construction, manufacturing, and food processing (Osei et al., 1993). Soap and detergent production, food processing, tailoring, wood processing, furniture manufacturing, electrical assembly, agroprocessing, retail and wholesale trading are all examples of typical SMEs (Dawson, 2014; Osei et al., 1993; Quartey, 2003). The services industry as a whole account for only 29.5 percent of GDP, although wholesale and retail trade accounted for 6.9 percent in 2004, according to the state of the Ghanaian economy report for 2005 (Institute of Statistical Social and Economic Research, 2005).

SMEs in Ghana can be found both in urban and rural locations, with the bulk being located in just a few large urban and suburban districts. SMEs in urban areas have expanded more quickly than their rural counterparts

because of the greater availability of a wage-earning labour force. Enterprises in cities can be further divided into the organised sector and the unorganised sector. In contrast to the paid personnel and official locations associated with the organised firms, the unorganised enterprises typically have no salaried employees and instead rely on individuals conducting their daily operations in public spaces, from their homes, or in makeshift wooden buildings. Their primary workforce consists of relatives and/or trainees (Boeh-Ocansey, 1996). On the other hand, extended families, lone artisans, and women typically run rural businesses that rely on the harvest of regionally grown crops to feed their communities (Amu, 2005; Kayanula & Quartey, 2000).

Although most of these SMEs are owned by Ghanaians, a few are owned by foreigners; the bulk of these enterprises are sole proprietorships with a few partnerships and joint ventures (Osei et al., 1993; Quartey, 2003). Either the owner-manager founded the business or inherited it from his or her family. In other circumstances, the firm is acquired through purchase, merger, or other means (Quartey, 2003). The limited amount of cash available to these firms is typically generated from personal savings or assistance from family and friends. Few SMEs are financed through commercial bank loans, government aid initiatives, or other informal sources (Bani, 2003; Osei et al., 1993).

The Role of Small and Medium-Sized Enterprises

From the economic recovery programme in 1983 to the Growth and Poverty Reduction Strategy II (GPRSII) in 2008, SMEs have been pivotal in government initiatives aimed at fostering economic growth and reducing poverty (Aryeetey et al., 1994; Boeh-Ocansey, 1996). As a stepping stone to

local investment and long-term industrialization, small enterprises provide individuals with the opportunity to hone their entrepreneurial and managerial skills (Bani, 2003). In addition, the indigenous technology used by these companies is more likely to make use of local raw materials and equipment, reducing the need for costly imports and saving money (Aryeetey et al., 1994; Bani, 2003).

According to Abor and Quartey (2010), there is broad consensus that emerging countries' economic and social progress depends on the success of SMEs. SMEs contribute in numerous ways to the economy. Policymakers in low-income countries have identified SMEs as one of their top priorities for boosting economic growth. These businesses are widely acknowledged as the means through which developing nations might attain their economic growth goals. In many third-world countries, they represent a promising opportunity for economic growth and employment (Abor & Quartey, 2010).

In furtherance, SMEs appear to have an advantage over their larger-scale competitors due to their greater flexibility in responding to changing market conditions and their more versatile technological infrastructure. As a result of their adaptability, they are resilient under difficult financial conditions (Kayanula and Quartey, 2000). SMEs again have lower capital expenses connected with employment generation since they rely more heavily on labour than the bigger organisations (Anheier & Seibel, 1987; Liedholm & Mead, 1987; Schmitz, 1995). They help keep the economy afloat, create jobs, and raise wages. Due to their reliance on human labour, SMEs perform better in less densely populated urban and rural locations. This, in turn, helps to more evenly disperse economic activity over the region and reduces the incentive

for people to move to larger metropolitan centres. It is argued that small-scale production units can encourage a more equal distribution of wealth than large enterprises due to their spatial dispersion and labour intensity. They boost the effectiveness of local markets and make better use of limited resources, both of which contribute to sustained economic expansion (Kayanula & Quartey, 2000).

SMEs add to a country's GDP by creating valuable commodities or by providing services to individuals and businesses. It includes selling goods and, to a lesser extent, services to customers overseas (Abor & Quartey, 2010). The great majority of businesses in Ghana are considered SMEs. They account for 92% of all enterprises in Ghana, 70 percent of GDP, and 80 percent of all jobs. Furthermore, Oppong, Owiredo, and Churchill (2014) state that SMEs are the backbone of Ghana's private sector and fuel its rapid expansion. It is believed that 70% of Ghana's industrial establishments fall within the category known as the SME sector. SMEs are crucial to Ghana's economic policy since they account for over 92% of all firms in the country and employ over 60 percent of the working population, the vast majority of whom live in rural regions. It is also believed that the sector is accountable for 85 percent of manufacturing jobs and, to a greater extent, overall job growth in the country (National Industrial Survey, 2003, as cited in Oppong et al., 2014). SMEs may not thrive in this globalised and dynamic business environment without employing digital tools in their activities; hence, the need to consider the digital entrepreneurship concept.

Digital Entrepreneurship

If essential human activities continue to rely on the old method of doing things in our rapidly changing environment, we are doomed to a life of misery. Literature abounds in its praise of entrepreneurship as the engine that drives economic growth and prosperity in all societies, developed and developing alike; without it, human civilization as we know it may collapse. Therefore, this spirit of enterprise cannot be left behind in the midst of today's rapidly evolving digital landscape. In this context, being proactive implies taking advantage of all the available digital resources that bring entrepreneurship up to speed with the rapid digitalization of businesses of all sizes and types. To that end, it would be prudent to clearly and extensively elaborate on the concept of digital entrepreneurship and its evolution so that SMEs can understand and benefit from its relevance.

Evolution of Digital Entrepreneurship

Paul, Alhassan, Binsaif and Singh (2023) record that new forms of businesses were established as early as the 1840s, in response to the rise of industrialization. This phenomenon birthed the term "entrepreneurship," which became known and commonly used in the 1980s (Stevenson, 1983). During that period, one definition of entrepreneurship theory was centred on the study of the conditions under which new firms emerge. Gartner (1989), in an attempt to simply contextualise the term, opined that the theory of entrepreneurship would not be complete without explaining who entrepreneurs are. In light of that, the scholar defined entrepreneurs as those who take the initiative to create new businesses. In other words, an entrepreneur is someone who creates a

market niche or business plan to meet the requirements and needs of that market (Garfield, 1986; Gartner, 1985).

According to Stevenson (1983), entrepreneurship is a desirable career choice for many people because it provides opportunities for autonomy, financial success, and social status. Hence, many large businesses are trying to adopt an entrepreneurial orientation in order to better compete with their smaller, more successful rivals. In recent times, global businesses have been undergoing a digital transformation for decades, through the proliferation of the internet and other digital technology (Paul et al., 2023). The infusion of these digital tools into the phenomenon is the inception of the term digital entrepreneurship. Thus, the term digital entrepreneurship was coined to describe a sub-category of entrepreneurship in which some or all of what would be physical in a traditional firm has been digitalized. Although it first appeared in the early 1990s, this is often regarded as a recent development (Hull et al., 2007). While digital transformation is not the only answer to the myriad problems facing modern firms, the lessons learned by digital entrepreneurs can help any firm, regardless of its industry, bounce back from setbacks and emerge stronger than before (Khlystova Kalyuzhnova & Belitski, 2022). In view of this, several definitions emerged from the diverse perspectives of organisational researchers and academics after the concept's inception.

Definition of Digital Entrepreneurship

Digital entrepreneurship defies a precise conceptualization in that, whereas some scholars have chosen to view digital entrepreneurship as a combination of digital technology and entrepreneurship innovation (Beckman,

Eisenhardt, Kotha, Meyer, & Rajagopalan, 2012; Ferreira et al., 2016), others have chosen to narrow the concept to the achievement of entrepreneurship goals with digital technological applications (Wallin, Still, & Henttonen, 2016).

According to Anim-Yeboah et al. (2020), digital entrepreneurship is defined as the pursuit of business or economic opportunities through the use of digital technologies. Digital entrepreneurship is the process of entrepreneurially creating digital value through the use of various socio-technical digital enablers that facilitate the acquisition, processing, dissemination, and consumption of digital information (Sahut, Iandoli, & Teulon, 2021). According to Autio, Szerb, Komlósi, and Tiszberger (2018), digital entrepreneurship provides the platform for organisations to focus their vision and priorities on responding to the changes taking place in the external environment and making sure that all of their members are working towards the fulfilment of their set goals. The researchers added that digital entrepreneurship is a top-down initiative that focuses on the firm as a whole and requires input from all levels of management to be successful. Anwar and Daniel (2016) and Paul, Alhassan, Paul et al. (2023) provided a definition of digital entrepreneurship in terms of its dimensions, elaborating that it entails three main processes: digital leadership, digital knowledge and digital creativity, which entail selecting the most suitable alternatives to management trends, where the organisation may select one or more strategies, and typically what advantages and disadvantages each strategy has.

Furthermore, Farani Karimi and Motaghed (2017) assert that digital entrepreneurship is closely linked to an organisation's need to grow and

survive in an environment that is continuously changing. Due to this, digital entrepreneurship focuses on two types of activities: identifying the strengths and weaknesses of the organisation and determining the strategic steps that are needed to maintain and improve the level of performance. Liu et al. (2024) also argue that because of digital entrepreneurship, businesses can reap numerous benefits. The authors added that digital entrepreneurship assists organisations in anticipating changes in their external environment and how to adapt to them by allocating the available resources and determining the methods of their use, organising the sequence at the various administrative levels, and clarifying the organisation's image in the eyes of all stakeholders (Awawdeh, Abulaila, Alshanty, & Alzoubi, 2022).

Similarly, Kollmann (2014) linked digital entrepreneurship to e-entrepreneurship. According to Kollymann, e-entrepreneurship refers to the establishment of a new company with an original business concept within the net economy that delivers its products and/or services based on a solely electronic generation of value. The fact that only information technology advancements have made this value proposition possible is more significant. Hull, Hung, Hair, Perotti, and DeMartino (2007) also used the term “digital entrepreneurship” to describe the process of starting and operating a business in light of technological advancements. In addition, Nambisan (2017) defined digital entrepreneurship as the confluence of digital technologies and entrepreneurship and the platforms, infrastructures, or things that use computing power on universal public networks. Le Dinh, Vu, and Ayayi (2018) added to this definition by noting that digital entrepreneurship has ascended over technology resources, including the Internet and Information

and Communications Technologies (ICT). According to Sussan and Acs (2017), the integration of digital infrastructure and entrepreneurial agents within the context of both ecosystems constitutes digital entrepreneurship.

Dimensions of Digital Entrepreneurship

A great deal of literature found support for the conceptualization of digital entrepreneurship as a multidimensional variable (Anwar & Daniel, 2016; Awawdeh et al., 2022; Bach Jaklič, & Vugec, 2018; Paul et al., 2023). According to Anwar and Daniel (2016) and Pejic Bach et al. (2018), digital entrepreneurship is comprised of three key processes or components: digital creativity, digital leadership, and digital knowledge. Awawdeh et al. (2022) also posited that the concept of digital entrepreneurship is linked to three variables: digital creativity, digital leadership, and digital knowledge. The present study utilised these three dimensions of digital entrepreneurship as employed by the aforementioned authors.

Digital Leadership

Researchers in the field of organisational behaviour have focused much of their attention on the topic of leadership. While academics have sought to develop the conceptual foundations of leadership, practitioners have typically absorbed and implemented leadership models that lead to improving the effectiveness of their organisations (Freitas Junior, Cabral, & Brinkhues, 2020; Kieser, 2017). The term digital leadership was literally coined from leadership and digitization (the application of digital tools in any endeavour), which are both known to be key contemporary organisational variables. According to Sheninger (2019), digital leadership is one of the modern terms employed to describe the use of digital platforms in directing and influencing the behaviour

of employees to achieve strategic organisational goals. In this same line of reasoning, Brett (2020) and Prince (2018) establish that digital leadership is built on merging leadership qualities with digital competencies in order to inspire and encourage followers in an organisation to achieve its strategic objectives.

Avolio, Sosik, Kahai, and Baker (2014) defined digital leadership as a social impact process rooted in both proximal and distal settings and mediated by AIT (Advanced Information Technology) that can result in a change in attitudes, feelings, thinking, behaviour, and performance. Hüsing (2013) interchanged e-leadership for digital leadership. The expert demonstrated that “e-leadership is the achievement of a goal dependent on ICT through the management of human resources and the use of ICT. E-leadership is a style of leadership that is defined by the sort of objective that must be achieved and the resources that a leader must coordinate and manage. In the case of e-leadership, both the purpose and the resources involve using ICT” (Hüsing, 2013, p. 13). This suggests that ICT, both as a leadership channel and as a substantial aspect of organisations, is integral to the development of e-leadership. The aforementioned definitions of e-leadership, however, do not usually speak to the topic of e-leadership with respect to things that are not digital.

Against this background, Van Wart, Roman, Wang and Liu (2019) point out that e-leaders in practice require employing both technological and non-technological forms of leadership. They suggest that it is time to acknowledge the increasingly hybrid nature of labour. In a similar vein, the term e-leadership describes a leader who is adept at combining digital and

analogue forms of communication. It necessitates familiarity with existing ICTs, the ability to select and choose which new ICT idea to implement in one's firm, and the requisite technical competence to make effective use of the tools (Jameson et al., 2022).

Interestingly, Eberl and Drews (2021) noted that this kind of pragmatic realisation of the larger ramifications of e-leadership in regard to both the digital and non-digital has arguably led to a development in cognition of the constraints of e-leadership concepts. Consequently, a more revolutionary idea of digital leadership as an enterprise-wide process emerged over time as a direct result of these developments. Fast-forward: Eberl and Drews (2021) expand upon previous definitions of e-leadership to highlight the key distinction between e-leadership and digital leadership. According to their research, digital leadership is broader than e-leadership. Digital leadership is a means to the end of digitally enabled business models, digital organisation, and employee management, while e-leadership employs technology to supplement preexisting enterprises.

To fill in the blanks left by the limited prior literature on digital leadership, the concept is explained as a complex construct aiming for a customer-centred, digitally enabled, leading-edge business model (Abbatiello, Knight, Philpot, & Roy, 2017), transforming the role, skills, and style of digital leaders (Abbu, Mugge, Gudergan, & Kwiatkowski, 2020), and realising a digital organisation. In a nutshell, digital leadership is “doing the appropriate things for the strategic success of the digitalization of the firm and its business ecosystem” (El Sawy, Kraemmergaard, Amsinck, & Vinther, 2020, p. 141). Digital leadership requires a distinct way of thinking about company strategy,

business models, the IT function, enterprise platforms, mentalities and skill sets, and the workplace. Similarly, Sasmoko et al. (2019) suggest that digital leadership is a form of dynamic capacity that enables an organisation to react to a changing business environment by creating customer-centric offerings. Consequently, digital leadership is focused on monitoring business marketplaces and obtaining information via digital platforms in order to develop partnerships and steer organisational resources towards providing solutions that fulfil client expectations (Braf & Melin, 2020).

In an entrepreneurial setting, there can be no digital leadership without digital leaders. Digital leaders are the digital entrepreneurs who serve as the forerunners for the digitization processes in their enterprises. Ngoasong (2018, p. 483) defined digital entrepreneurs as individuals who create and deliver key business activities and functions, such as production, marketing, distribution and stakeholder management, using information and communication technologies.’ For Sussan and Acs (2017, p. 66), a digital entrepreneur is described as any agent that is engaged in any sort of venture, be it commercial, social, government, or corporate, that uses digital technologies... operates within the confines of existing platforms. In other words, they are performing activities that need digital engagement but may not in themselves be digital, for example, an Uber taxi driver. The agent leverages digital technology and seeks and acts on these opportunities within the marketplace, in effect increasing efficiency by moving the economy closer to the technological frontier.’ Similarly, Millman, Wong, Li, and Matlay (2009, p. 245) view a digital entrepreneur as ‘an individual who develops an enterprise based on the internet connectivity model (i.e., an IP-based protocol) and shapes new

business models and technologies by creating and implementing innovative trading outlets in a fast-growing niche market. Internet entrepreneurship is often described as high-growth, mainly due to the wideranging coverage of Internet-based e-markets.'

Furthermore, Artüz and Bayraktar (2021) link digital entrepreneurs to digital leaders in any enterprise, be it small, medium or large. The authors explain that digital leaders, like digital entrepreneurs, interact with the digital world differently in terms of their thoughts and behaviours than traditional leaders. Therefore, digital leaders are under a necessity to modify their leadership style by acquiring computer, communication, and content abilities in order to achieve a high degree of success for their organisations. As a result of the paradigm shift in all parts of the world to meet up with the increasing demands of technology, organisations are now compelled to function in a business climate characterised by volatility, uncertainty, complexity, and ambiguity (VUCA); thus, the role of the entrepreneur as a leader in employing digital tools to guide the firm to success (Daft, 2021).

Until now, previous literature has evaluated digital leadership from two separate approaches. The first viewpoint posits that digital leadership is measured using a four-dimensional model comprised of digital culture, digital competencies, digital insights, and digital strategy. The second direction offered a five-dimensional model for measuring digital leadership, which includes innovation, profound knowledge, collaboration, inquisitiveness, and global vision (Mihardjo et al., 2019; Sasmoko et al., 2019; Sultan & Suhail, 2019). Creativity in the sphere of digital leadership refers to the use of contemporary technology-based ways to influence the behaviour of employees

(Tiekam, 2019). For the digital leader to accomplish the desired impact on employee behaviour within the constraints of existing organisational resources, a comprehensive understanding of administrative facets and technical advancements is needed (Mihardjo, Sasmoko, Alamsyah, & Elidjen, 2019). Collaboration, both internally and internationally, is a competency that digital leaders emphasise in order to achieve organisational performance and develop innovative goods and services (Prince, 2018). Inquisitiveness is the psychological trait that increases leaders' desire to attain tough goals and pushes them to exert extra effort to reach a distinguished competitive position (Sasmoko, Mihardjo, Alamsjah, & Elidjen, 2019). Global vision refers to the aspirations of leaders to create and develop high-quality products and services, hence achieving a competitive position among worldwide businesses (Braf & Melin, 2020; Wasono & Furinto, 2018).

The role and importance of digital leadership in the success of an enterprise's objectives cannot be overemphasised. This is because the success of any enterprise depends on the vision of its leaders, and digital leadership plays a crucial role in both formulating and enacting the initiatives that bring that vision to fruition through inspiring employees and optimising business processes (Cong & Thu, 2020; Mardiana, 2020). According to Artüz and Bayraktar (2021), a company can gain a competitive edge through digital leadership if its leaders adopt a strategy that maximises its use of technology and other resources. In addition, digital leadership's reliance on tech progress and connection with the business environment can shorten the time it takes to complete a project as a result of a lower failure rate and better knowledge of what clients want (Freitas Junior et al., 2020; Sheninger, 2019). Dijkstra

(2020) also shared the view that digital leadership can help improve communication across departments and different managerial levels. Consequently, outputs and productivity increase, leading to greater customer satisfaction and a larger proportion of the market for the business. When a business offers customers cutting-edge products and services, it boosts its competitiveness and market share (Cong & Thu, 2020).

In addition, it aids in the achievement of organisational efficiency and effectiveness by promoting the wise allocation of resources and the adoption of cutting-edge technological investments that lower operational costs (Farhana & Swietlicki, 2020). Quick decision-making is essential for organisations to allocate their resources and expertise to the most productive areas of their operations (Constantiou, Shollo, & Vendelø, 2019; Wang, Wu, Gu, & Hu, 2019). As a result, digital leadership aids in making the company more adaptable by raising its level of contextual awareness (Brett, 2020). Integrating technology into leadership processes to direct the efforts of workers and inspire them to suggest novel approaches that satisfy customers' hopes and dreams is also essential to the process of developing new products and services (Braf & Melin, 2020; Felix, Aparicio, & Urbano, 2019; Sasmoko et al., 2019). In addition to helping develop new products and services, digital leaders should also come up with fresh approaches to management and workflow that boost the business's competitiveness and capacity to reach its long-term objectives (Mihardjo et al., 2019; Wasono & Furinto, 2018).

Digital Knowledge

The term digital knowledge refers to the specialised expertise and hands-on experience of an entrepreneur related to computing and networking

(i.e., information, computing, communication, and connectivity technologies; Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013). Also, Awawdeh et al. (2022) aver that digital knowledge is a process that entails selecting the most suitable alternatives to management trends, from which an enterprise may select one or more strategies, each of which typically has advantages and disadvantages that allow management to carry out a balancing process in order to efficiently and effectively achieve the goals of the enterprise. As a component of digital entrepreneurship, digital knowledge provides employees with novel information and understanding to help them achieve a mental equilibrium that boosts performance, increases the company's resources, and equips employees with the technical expertise necessary to face the challenges of the present and the future (Awawdeh et al., 2022).

Digital knowledge is used to describe the new type of information that can be altered and manipulated through the use of technological tools and other digital devices. The first and most noticeable aspect is the easy availability and accessibility of high-quality information resources (Bélisle, 2006). According to the definitions provided by Anwar and Daniel (2016) and Pejic Bach et al. (2018), digital knowledge is the procedure by which the most suitable alternatives to management trends are selected; an organisation may select one or more strategies, and typically, each strategy has advantages and disadvantages that enable management to conduct a balancing process in order to achieve the organisation's goals efficiently and effectively. With adequate digital knowledge, an entrepreneur can be able to adopt the most appropriate business strategies with the greatest merits for their enterprises.

Digital knowledge is knowledge that is not only obtained through digital technologies but is also partially processed using digital tools (Bélisle, 2006). The use of technology tools to access information (such as databases, digital libraries, or the internet) has necessitated the ability to deal with information of unfathomable volume, complexity, and accessibility at unimaginable rates. This requires the transmission of data in picoseconds and gigabits. The required digital knowledge abilities include the ability to gather huge quantities of information from a variety of sources, the ability to select and synthesise it, and the ability to analyse and assess it while taking into account varying cultural context and formatting (Bélisle, 2006). Thus, as a digital entrepreneur, one must possess the requisite advanced knowledge in the use of technological tools to gather a huge amount of information from a different source, select, synthesise and analyse it for the purpose of improving their entrepreneurial processes.

Furthermore, digital knowledge, according to Bassellier, Reich, and Benbasat (2001), refers to modern and cutting-edge technology, such as specialised languages, applications, platforms, and tools, that can be beneficial to the firm. Particularly, knowledge of the underlying client-side and server-side technologies is necessary for the development of digital business applications (Moløkken & Jørgensen, 2005). Among these requisite technologies are knowledge of web technologies, Web standards, programming and markup languages, application server software, database systems, and query languages, as well as application frameworks, reusable elements, and development tools (Whitehead Jr., 2002). Therefore, digital entrepreneurs face challenges from an ever-growing body of new digital

knowledge due to the rapid changes in the technical environment (Lee, Trauth, & Farwell, 1995).

In addition, the development of Web applications requires not just digital knowledge but also a solid knowledge of the theoretical foundation (Whitehead Jr., 2002). In accordance with this criterion, the theoretical knowledge part of digital knowledge involves the formal procedures, theories, and abstract concepts of computer science. Theoretical knowledge, again, does not require any particular hardware or software in order to be applied to the solution of recurrent issues in the enterprise (Heckman, 1998). Areas of the required theoretical knowledge include algorithms, data structures, object-oriented concepts, structured design, design patterns, software architectures, data design, and human-computer interaction knowledge (Mirza & Chan, 2005). It is, therefore, impossible to guarantee the stability and scalability of web-based software without first having a firm grasp of the theories and concepts that underpin its architecture (MacCormack, Verganti, & Iansiti, 2001). Hence, it is one of the most important aspects of running a prosperous digital enterprise.

Kollmann, HäSel and Breugst (2009) also argue that, due to the complex nature of digital enterprise initiatives, which necessitate expertise in both business and IT, most digital enterprises are managed by multidisciplinary teams. Because information technology (IT) is used to both brainstorm and implement new electronic product ideas, the knowledge of digital entrepreneurs is crucial to these groups. As a result of factors such as technology change, time-to-market constraints, and continuous product iteration, e-business product development differs from more traditional

software development. At its inception, an enterprise needs at least two people to invest their own money and play a vital role in shaping the future of the business. Due to the multidisciplinary nature of e-commerce, digital enterprise teams frequently include members with business and IT backgrounds.

Conversely, Furr (2021) argues that, although digital knowledge is a specialised source of technological information that is needed at the top level of the enterprise, entrepreneurs who know so much about technology could fall into the trap of working on technology-related tasks that are not related to the core business. Implying that too much digital knowledge can make entrepreneurs less effective at their jobs in the quest for digital innovation. In light of this, digital entrepreneurs are required to possess skills and abilities that are relevant to the challenge of new enterprise creation as well as being responsible for the overall processes and outcomes of the enterprise (Kollmann et al., 2009).

Digital Creativity

Entrepreneurs, by definition, must be able to develop, invent, or bring into existence some new products (Mazla, Jabor, Tufail, Yakim, & Zainal, 2020). The creation and implementation of novel, relevant ideas to start a new enterprise characterizes entrepreneurial creativity (Wise, Zdemir, & Fillis, 2022). Creativity, in its broadest sense, is an ongoing process that necessitates the participation of both the inventor and the users (Mazla et al., 2022). Relatedly, Puccio (2017) explains creativity as the ability to discover new opportunities, to develop unique ideas, to flexibly adjust to changing situations, and to apply one's imagination to solving complex problems. Therefore, creativity is simply the ability to come up with something new and

useful as an answer to a problem. Amabile and Fisher (2012) stated that entrepreneurs must be creative in order to find new possibilities, create new products, and launch new businesses. Digital creativity refers to the integration of technology into creativity. According to Janse van Rensburg, Coetzee and Schmulian (2021), creativity in the digital age refers to the use of computers, the internet, and other electronic media to generate and experiment with original forms of ideas and products.

Soltanifar, Hughes and Göcke (2021) also explain that digital creativity requires a diverse workforce with diverse job requirements. According to the researchers, the production of a new product or service in an entrepreneurial context necessitates the performance of five essential roles. That is, digital creativity demands that the entrepreneur generate a new idea or a new way of doing things (compose), develop the idea into something actionable (code), refine the idea through test marketing and evaluations at various stages of the product development process (edit), assemble the necessary parts, equipment, and procedures to create a marketable product or service (curate), and then ensure customer satisfaction (perform). In recent times, digital creativity has had a significant impact on creativity's definition, expression, and reach. Thus, artificial intelligence (AI), virtual reality (VR), and the internet of things (IoT) are just a few examples of technology-driven developments that have supplanted and enhanced conventional methods of promoting creativity in enterprises (Soltanifar, Hughes, & Göcke, 2021).

According to Lee (2012), a broad definition of digital creativity encompasses all creative endeavours driven by digital technologies. Understanding and embracing digital creativity are becoming increasingly

vital for already established businesses. For instance, banks must stay current with the latest financial technology advancements to remain useful to their customers, and SMEs must modernize their entrepreneurial practices. Keeping up with the most recent advancements in digital technology is not an effortless task, and in this phase of adaptation, creativity plays a vital role (Nambisan, 2017).

Furthermore, Soltanifar et al. (2021) assert that a grasp of digital creativity can assist an entrepreneur in generating timely and relevant ideas. Digital creativity is the process of bringing novel and imaginative ideas into reality, practice, and solutions through the application of digital technologies to one's knowledge, skills, and abilities (Akhter, Karim, & Islam, 2022). In addition, digital creativity is considered a crucial element of digital entrepreneurship, in which entrepreneurs must, as a matter of necessity, be creative and innovative in order to identify and capitalise on opportunities in a dynamic entrepreneurial environment (Anjum, Farrukh, Heidler, & Daz Tautiva, 2020). Digital creativity also offers the entrepreneur the capacity to develop new ideas by integrating or repurposing existing ideas, inventing new forms, and generating imaginative skills and cognition (Akhter et al., 2022). In view of its relevance to the successful launching of enterprise, Chia & Liang (2016) regard digital creativity as the catalyst for entrepreneurial intentions, due to its high level of entrepreneurial desirability (Zampetakis, 2008).

To draw a clear demarcation between digital creativity and innovation in the context of this study, it is expedient to establish that creativity and innovation are interconnected concepts essential to entrepreneurship, yet they serve distinct roles. Creativity involves the generation of novel ideas and

perspectives, allowing entrepreneurs to identify unique opportunities and envision solutions to problems (Hidayat, 2024). Scholars such as Barringer and Ireland (2019) emphasise creativity as a foundational skill that fuels the entrepreneurial process by enabling original thought and ideation. In contrast, innovation is the practical application of these creative ideas, transforming them into viable products or services that deliver value to the market (Ballor & Claar, 2019; Vehar, 2020). Hisrich and Peters (1986) highlight that innovation not only requires creativity but also involves strategic implementation and risk management to ensure commercial success.

Schumpeter's theory further elaborates on innovation as a driver of economic development (Schumpeter, 1911), positing that it leads to the creation of new markets and industries, thereby reshaping economic dynamics. Thus, while creativity is about generating ideas, innovation is about executing them effectively, making both crucial for entrepreneurial success. Nonetheless, this study uses digital creativity as a necessary tool that helps firm owners or managers to recognise distinct market possibilities and conceive solutions to challenges by leveraging digital technologies to gain a competitive advantage over other enterprises in the industry.

Digital Technologies Used in Entrepreneurship

Nambisan (2017) asserted that digital technologies emerge in the field of entrepreneurship as three different but interconnected components: digital platforms, digital artefacts, and digital infrastructure. According to Buckley and Nzembayie (2022), the foundation of digital business concepts and marketing strategy are digital artefacts and digital platforms, which distinguish digital entrepreneurship from other types of entrepreneurship. This implies

that enterprises, whether large or small, cannot exist without digital artefacts and digital platforms. These vital digital tools are discussed below.

Digital Platforms

Digital platforms are typically viewed as online services provided by a platform owner in the management of information systems (Nambisan & Sawhney 2011). Another definition of digital platforms is that they are virtual hubs for communication and collaboration (Van Dijck, 2013). Additionally, platforms are viewed as regulators (Parker & Van Alstyne, 2014) because they use incentives, sanctions, and other mechanisms to encourage or discourage user activities (Parker, Petropoulos, & Van Alstyne, 2020). From a technological perspective, platforms are best understood in terms of their definition as a layered architecture (Gawer and Cusumano 2014) because they define a structural pattern wherein multiple horizontal layers cooperate to form a single, cohesive piece of unique code.

A digital platform, in Buckley and Nzembayie's (2022) view, is an online facility built to support a variety of services. The online facility becomes a matchmaker that serves as a connector between enterprises and their customers. Sedera, Lokuge, Grover, Sarker and Sarker (2016) emphasised the use of digital platforms as a means of advancing the information technology infrastructure; these platforms include social media, mobile computing, and e-commerce platforms, all of which have helped enterprises grow and develop into digital conglomerates. Digital platforms are strategic tools and dematerialization processes that can provide significant cost savings and increase revenues for enterprises (Esposito De Falco, Renzi, Orlando, & Cucari, 2017).

In furtherance, digital platforms are virtual locations that facilitate the exchange of information, products, and services between two or more distinct types of participant groups (Evans & Schmalensee, 2016; Helmond, 2015). They are also viewed as multisided platforms that connect and mediate the interaction between two or more heterogeneous groups, such as an enterprise and its customers (Bauer 2014). Also, Khan, Mahmood and Tariq (2021) argue that entrepreneurship is flourishing because of the help provided by digital platforms. Entrepreneurs built networks with other users of digital platforms to learn about and participate in new business opportunities (Taylor-Wesselink & Teulon, 2022). By so doing, digital platforms have helped businesses save money by better meeting customer needs at the right moment, influenced how people interact with one another online, and contributed tremendously to economic growth.

Nambisan and Baron (2021) describe a digital platform as a shared, common set of services and IT architecture that hosts digital artefacts. Apple's iOS (a mobile app system for Apple smartphones), Google's Android (which enables mobile apps to run on their smartphones), Amazon Web Services (which offers digital tools and platforms to start-ups), Microsoft Azure (digital tools and platforms for small businesses), Google Clouds (digital tools and platforms for small businesses and start-ups), and Ford's SYNC are examples of digital platforms that host integrated communication, navigation, and entertainment apps in cars. Entrepreneurs throughout the world explored business opportunities using digital tools and platforms and supplied better-quality products and services to target markets (Nambisan & Baron, 2021; Park, Kim, Jeong & Minshall, 2021).

Digital Artefacts

According to Buckley and Nzembayie (2022), a digital artefact refers to any physical or virtual item that was created using software. Software, in its broadest sense, includes, but is not limited to, mobile and desktop applications, artificial intelligence (AI) and machine learning (ML) algorithms. Buckley and Nzembayie (2022) further posited that the term digital artefact encompasses not only the finished outcome of a software development process but also its byproducts in the form of media material, as well as eBooks, infographics, and other forms of digital content. To paraphrase Engholm (2010), a digital artefact cannot be understood in isolation from its use. Actualization and incorporation of the artefact within a given context are influenced by the user's application abilities, cultural and institutional elements that form the subject's experience with the artefact, and the specific setting in which the artefact is embedded. According to the researcher's definition, a digital artefact is a heterogeneous construction whose appearance and function are determined by the sum of its features. Hron, Obwegeser and Müller (2022) state that there is no single way to conceptualise digital artefacts, drawing inferences from existing literature on digital innovation. In view of that, Ciriello, Richter and Schwabe (2019) explained digital artefacts as digital tools developed through innovative methods such as ideation, sketching, modelling, and prototyping software systems for the purpose of collaborating to influence decision-making. In their earlier works, the authors defined digital artefacts as any generic representation of a future software product (Ciriello et al., 2017).

Moreover, according to Engholm (2010), digital artefacts can mediate experiences, captivate, and provide a pertinent framework for interaction and network building. There is no facet of human existence in which digital artefacts do not have a role, whether as a tool or medium for work, communication, entertainment, or the establishment of networks and communities (Ciriello et al., 2019). This indicates that digital artefacts have the potential to be helpful tools for facilitating both discourse and decision-making (Richter & Schwabe, 2017). Private usage of digital artefacts provides the inventor with the first inkling of a potential new idea, which inspires deeper study and results in more extended creation (Rheinberger, 1997). Examples of digital artefacts include blogs, which are considered a Web 2.0 phenomenon—a user-driven web. Engholm (2010) describes Web 2.0 as a variety of online communities and services, such as public diaries, Wikipedia, social networking sites, video sharing sites, photo sharing sites, news and social networking aggregators like Reddit and StumbleUpon, and online marketplaces like Amazon and eBay. Other examples include social media profiles, computer bugs, and viruses (Ekbja, 2009).

A digital artefact is comparable to a recombinable resource (Henfridsson et al., 2018), an extendable capital asset (Woodard et al., 2013), or a system with layered modularity (Yoo et al., 2010). Hui (201) states that digital artefacts “take shape on a screen or hide in the back end of a computer programme and are composed of data and metadata governed by structures or schemas.” In conclusion, Kallinikos et al. (2013) proposed three primary characteristics of digital artefacts: editability/interactivity, openness/re-programmability, and distributivity.

According to Orlikowski (2000), editability or interactivity refers to technology that users can modify based on their own knowledge, standards, and expectations. The usage context of a digital artefact governs the actions that can be performed with that artefact (Faulkner & Runde, 2009). This means that, through local modification and combination, the same artefact may serve different roles in different societies. Reprogrammability, or openness, allows digital artefacts to accept generativity since they can be combined to create new solutions (Eck et al., 2015; Nambisan et al., 2017; Zittrain, 2008) and form extensible software platforms (Tiwana et al., 2010). Since they are always being refined, they might also be viewed as intentionally unfinished (Garud et al., 2008). For the last property of distributivity, it states that digital artefacts can diffuse throughout the institutional fabric (Kallinikos et al., 2010) and be included in a wide range of labour processes due to their adaptability. In this case, the materiality of digital artefacts is a direct consequence and reflection of their network configuration capabilities (Eckbia, 2009). It is therefore impossible to completely comprehend digital artefacts without understanding the interconnected networks of players.

Digital Infrastructure

The final digital technology component employed in the field of entrepreneurship, according to Nambisan (2017), is digital infrastructure. The term digital infrastructure is used to describe a group of interconnected technologies that make modern life possible (Buckley & Nzembayie, 2022). These technologies include the internet, high-speed networks, 5G wireless networks, microprocessors and storage, cloud computing and computing devices, and open technical standards. They play a crucial role as the firm's

external facilitators for digital startups. Cloud computing is an example of an essential infrastructure enabler for modern and future forms of digital enterprise (Buckley & Nzembayie, 2022).

Similarly, digital infrastructure is used to describe an organisation's system of interconnected and interoperable information technology components, such as its servers, networks, workstations, databases, communication tools, and core applications, and the associated policies and procedures that (1) facilitate widespread communications exchanges across the enterprise, (2) facilitate the creation, deployment, management, and upkeep of current and future business software, and (3) foster an environment conducive to creative problem-solving (Lewis & Byrd, 2003). In a study related to this, Duncan (1995) listed the digital infrastructure of an enterprise to include networks, databases, procedures, and software. It further consists of the shared, physical IT resources that serve as the foundation for business software. Rockart, Earl and Ross (1996) also describe digital infrastructure as telecommunications, computers, software, and data that are integrated and interconnected, emphasising their importance in making it easy for all forms of information to be quickly and easily disseminated through the network and redesigned processes.

The construction of a robust digital infrastructure is crucial to the success of digital entrepreneurship in the face of new economic management structures and global challenges (Kraus, Kraus, & Shtepa, 2021). Cellular infrastructure and satellite networks, according to Kraus et al. (2021), add another degree of complexity to the idea of digital infrastructure. Kliushnyk, Kolesnykova and Shapoval (2019) define digital infrastructures as the systems

of computers, networks, and other electronic equipment that enable digital (rather than analogue) interactions, data transfers, signals, etc. Digital infrastructure is therefore a network of digitally enabled equipment, technologies, electronic connections, and services that facilitate digital innovation and digital social activities. Recent advancements in digital technology are disrupting traditional business patterns as well as the relationships between institutions and the economy as a whole. Kraus et al. (2021) state that digital infrastructure is intended to assist international cooperation in the innovation sector, as well as partnerships between key policy and funding organisations, charting and monitoring for decision-making, and other related endeavours.

To a similar extent, digital infrastructure technologies are required to boost digital industry productivity and the development of digital entrepreneurship, and in some industries, they form the backbone of product and production digital strategy (Manzhura, Kraus, & Kraus, 2019). Digital marketing is a widely used component of today's digital infrastructure (Durmaz & Efendioglu, 2016). Digital marketing is the practice of employing various digital channels to advertise a firm's products to a wide audience. Digital marketing extends beyond online advertising because it extends to other mediums, including TV, radio, and billboards (Durmaz et al., 2016). According to Kraus et al. (2021), the formation of digital infrastructure attests to a new level of use of information and communication technologies across all spheres of socio-economic activity. This new level is the result of transformation processes involving the most cutting-edge general-purpose technologies in the field of information and communication. Because of this,

digital infrastructure is crucial, but it must be adaptable enough to accept deliberate shifts in all directions (Hanseth & Lyytinen, 2016).

According to systems and complexity theorists like Vaast and Walsham (2009) and Tilson et al. (2010), in order to fully understand the significance of digital infrastructure, one must also be familiar with the interaction between technological and social components. According to Bygstad and Øvrelid (2020), the networks of organisations, people, and technologies are the central focus of the digital infrastructure theory. The theory underscores the tenet that for an enterprise to gain an edge in today's market, they must invest heavily in their digital infrastructure. By doing so, businesses will be able to incorporate much more data into their systems and connect to more extensive networks. Again, digital infrastructure has shifted towards a developer's perspective on the organisation's technological decisions. Developers are the engines that power every firm; their ambitions are aligned with business agility via new technology. With digital infrastructure, improved group chat tools are made possible through widespread internet access. Further, businesses benefit from software-defined technologies in the presence of digital infrastructure (Nambisan, 2017).

The Role of Digital Entrepreneurship in Small and Medium-Sized Enterprises

In the business world, digital technology can be put to good use through digital entrepreneurship (Muafi, Syafri, Prabowo, & Nur, 2021). The biggest barriers to entrepreneurship, particularly for start-ups, are connected to time and space constraints, a lack of networks, limited capital, and restricted marketing mobility. The adoption of digital entrepreneurship may be the key

to solving some of these issues (Elia, Margherita, & Passiante, 2020; Martinez Dy, Martin, & Marlow, 2018). Digital entrepreneurship can generate business prospects with a much wider market and at a much lower cost (Elia et al., 2020; Martinez Dy et al., 2018). Additionally, digital entrepreneurship supports the interchange, transmission, and acquisition of knowledge, as well as the introduction of novel business practices (Geissinger, Laurell, Sandström, Eriksson, & Nykvist, 2018).

On the consumer side, technology-based entrepreneurship is a trend in the current global economy (Richter, Kraus, Brem, Durst, & Giselsbrecht, 2017; Cavallo, Ghezzi, Dell'Era, & Pellizzoni, 2019). Consumers are always interested in convenience, quickness, low cost, and high quality. This can be accomplished with digital technologies. Consequently, an increasing number of traditional businesses are transitioning to digital enterprises. The move from an offline to an online business demonstrates that digital enterprises have promising future potential (Nambisan et al., 2019; Richter et al., 2017). One of the business opportunities provided by advances in digital technology is how simple it is to start a digital-based business, also known as a startup. A startup is a new enterprise that can be founded by anyone without a significant amount of capital, and it has gained popularity among individuals in recent times as a result of user-friendly digital platforms.

Moreso, Vrontis, Chaudhuri, and Chatterjee (2022) argue that the economic and social values of a region can be enhanced when SMEs effectively adopt and make use of digital technologies. Startup SMEs get to improve their efficiency through the creation of social and economic value, provided they are well supplied with the right entrepreneurial orientation. In

general, digital technologies like social media, the Internet of Things (IoT), blockchain, big data analytics, and artificial intelligence (AI)-enabled applications have greatly aided the expansion of SMEs and other associated forms of entrepreneurship (Vrontis et al., 2022). It seems obvious that the adoption of digital entrepreneurship is likely to impact the well-being of enterprise managers as well as employees. In light of this, it will be prudent to review the literature on the well-being construct.

Measurement of Digital Entrepreneurship

The three dimensions of digital entrepreneurship used in this study were adapted from Anwar and Daniel (2016), Awawdeh et al. (2022), Bach, Jaklič, and Vugec (2018) and Paul et al. (2023) and the measures of the individual digital entrepreneurship dimensions were adopted from scales with confirmed reliability. Digital entrepreneurship dimensions were measured in terms of the extent to which SME owners blend the incorporation of digital technologies into their operations.

The indicators for digital entrepreneurship in this study include digital leadership, digital knowledge, and digital creativity. The study adapted Zeike et al. (2019)'s scale for measuring the digital leadership, digital knowledge, and digital creativity variable. Also, similar studies on digital entrepreneurship used these indicators (Anwar & Daniel, 2016; Awawdeh et al., 2022; Bach, Jakli, & Vugec, 2018; Paul et al., 2023) in assessing the construct. All the items were measured on a 7-point Likert scale (1 = least form of agreement and 7 = highest form of agreement) to enable respondents to indicate the degree or extent to which they had adopted the practice described by the item.

Well-being

People in all walks of life place a premium on happiness and well-being, which has ramifications for their psychological and physical health both in and out of their work (Fisher, 2014). That is why, for a very long time, organisational researchers have been fascinated by the topic of employee well-being and its associated positive attitudes and experiences relating to work (Fisher, 2014). Owing to the fact that well-being defies a precise definition (Lyubomirsky, Layous, 2013; Zheng, Zhu, Zhao, & Zhang, 2015), organisational researchers attempt to comprehensively define the well-being construct by first considering its domains so that no aspect will be neglected in its definition. In view of this, Fisher (2014) stated that hedonic well-being, eudaimonic well-being, and social well-being are the major domains of well-being.

Relatedly, Deci and Ryan (2008) concluded that there are two major philosophical perspectives regarding well-being: one is happiness-oriented (i.e., hedonism), which defines well-being as the subjective experience of happiness; and the other is concerned with actualizing human potential power (i.e., eudaimonism), which views well-being as the result of personal achievement, self-actualization, or self-positioning. Also, Warr (2013), in an attempt to define well-being, averred that well-being at work is multidimensional. The researcher conducted one of the most significant studies on the dimensions of employee well-being and defined employee well-being from the standpoint of employees' experiences in general and their job-specific characteristics. Warr (2013) claims that well-being can be separated into two independent components: context-free well-being and domain-

specific or occupation-specific well-being. Context-free well-being is concerned with people's general sentiments of well-being in all facets of life (e.g., life satisfaction, happiness). Domain-specific or occupation-specific well-being, on the other hand, includes experiences related to jobs such as job satisfaction and job attachment.

According to Tuzovic and Kabadayi (2020), prior research on employee well-being focused mostly on mental health, personality traits, and stress levels. Moving forward, researchers have broadened their focus to cover larger dimensions of well-being: psychological (i.e., subjective happiness and satisfaction), physiological (i.e., physical and physiological soundness), and social (i.e., interpersonal interactions) (Grant et al., 2007; Ponting, 2020). In this regard, De Simone (2014) referred to well-being as a mental, psychological, or emotional aspect of workers' lives. For Noble and McGrath (2012), well-being is a comprehensive concept that includes a person's perception of good mental and physical health, as well as their quality of life, contentment, and happiness with life.

Contrarily, based on how individuals perceive and experience their lives, Rath, Harter, and Harter (2010) identified five components of well-being. These five components include: career well-being, which explains how a person spends his or her time as well as enjoying what he or she does daily. Social well-being means having strong relationships and love in one's life. Financial well-being is the appropriate management of one's financial life in order to decrease stress and enhance stability. Physical well-being is characterised by good health and sufficient energy to do everyday tasks. Community well-being is a person's sense of connection and involvement with

the region in which they reside. According to Rath et al. (2010), career well-being is most likely the most important of the five factors identified as constituting total well-being.

Enterprise Manager/Employee Well-being

In terms of the business-specific context, Tehrani, Humpage, Willmott and Haslam (2007, as cited in Pagán-Castaño, Maseda-Moreno, & Santos-Rojo, 2020) report in their study “Well-being in Work Environments” that employee well-being has gradually gained relevance on the business agenda as more firms have begun to recognise the benefits of implementing employee welfare and health programmes. Although it appears that employees do receive formal leadership training, they are not necessarily equipped to recognise, understand, and manage the entire spectrum of emotions that accrue to their well-being. It again seems to indicate that all employees, including those in charge of managerial positions, go through significant stress and/or emotional distress while working. In order to avoid mistakes like not listening intently, reflecting on emotions, making inappropriate decisions, disregarding policies and procedures, straining relationships, and becoming blinded by daily organisational responsibilities, which cumulatively influence their overall well-being, employees must find ways to recognise, manage, and find balance with their emotions to significantly impact their own well-being (Tenuto, Gardiner, & Yamamoto, 2016).

Pradhan and Hati (2022) also stressed the need for employers to take an interest in their workers’ concerns and well-being, striking a middle ground between the mutual expectations of both employees and employers. Keeman Näswall, Malinen and Kuntz (2017) describe employee well-being as a

fundamental consideration for how organisations can achieve a competitive advantage. According to Deloitte (2017) and the Reward and Employee Benefits Association (2019, as cited in Tuzovic & Kabadayi, 2020), employee well-being is acknowledged as a serious issue for employees, employers, and society. Extant literature further suggests that employee well-being is linked to various performance measures, including productivity, employee turnover, job satisfaction, stress, and work-life balance (De Simone, 2014; Fisher, 2014; Holman, Johnson, & O'Connor, 2018). The above definitions from scholars indicate the essence of the well-being concept for the survival and growth of any entrepreneurial activity. In light of this, employees as well as managers of enterprises can be regarded as the engines that drive the vision of all organisations; hence, their well-being must be paramount to all business entities.

Again, Van Laar, Edwards and Easton (2007) and Reilly, Wu and Efraty (2008) use the terms quality of work life and work-related quality of life to describe employee well-being. This implies that enterprise managers' sense of well-being in an entrepreneurial context is correlated with the degree to which their enterprises run efficiently. In order to accomplish this, enterprise owners and managers will need to implement digital tools that enhance operational procedures and finished products. It is therefore plausible that the abrupt transition from traditional to digital entrepreneurship can have unintended mental health repercussions such as anxiety, loneliness, and depression as a result of the digitalization, which can have a detrimental impact on the well-being of enterprise managers. In view of this, examining the various dimensions of well-being can help one determine which parts of an

enterprise manager's life are most likely to be affected by the difficulties associated with the sudden digitalization of their enterprises.

Dimensions of Employees Well-being

Fisher (2014) advanced five domains comprising overall well-being. The five dimensions, according to the scholar, include hedonic well-being, eudaimonic well-being, social well-being, accomplishment and positive relationships with others. Similarly, Ryff and Keyes (1995) suggested a multidimensional model of well-being after analysing several studies and suggested personal well-being (PWB), social well-being (SWB), and emotional well-being (EWB) as the three main dimensions of well-being. Again, Rath, Harter, and Harter (2010) identified five components of well-being comprising career well-being, social well-being, financial well-being, community well-being and physical well-being. That notwithstanding, the literature on well-being indicates that well-being is multidimensional, and these dimensions can be categorised into financial and non-financial. For the purpose of this present study, non-financial well-being comprises subjective, social, and personal well-being.

Non-Financial Well-being

Subjective Well-being

Subjective well-being (SWB), also known as hedonic well-being, refers to the subjective evaluation of an individual's quality of life based on their own standards (Diener, 2000). It consists of two fundamental components: life satisfaction, or the assessment of one's quality of life, and emotional experience, encompassing both positive and negative emotions (Diener, 2000). Researchers state that SWB consists of three primary

components: high-level happy emotions, low-level negative emotions, and overall life satisfaction (Busseri, Sadava, & Decourville, 2007; Diener et al., 1999). A key aspect of SWB is its subjectivity, such that the evaluation of well-being is dependent on an individual's personal criteria rather than the standards set by others (Bakker & Oerlemans, 2011).

Subjective well-being, according to Fisher (2014), refers to a person's entire quality of life and reflects their perceived happiness. Good attitudinal evaluations and the perception of both positive and negative effects are all parts of subjective well-being. A good emotional state that results from an evaluation of one's job or job experiences is known as job satisfaction and is a crucial element of subjective well-being (Locke, 1976). It is the phenomenon that is most frequently studied in organisational behaviour (Brief & West, 2001).

In collectivist societies, however, harmonious connections are crucial to the experience of well-being; in this context, an individual seeks not just his or her own well-being but also the collective well-being of the society (Gao et al., 2010). Consequently, in many entrepreneurial contexts, well-being may not be only subjected to personal standards but rather to social or other criteria.

Social Well-being

Tuzovic and Kabadayi (2020) explain social well-being as the capacity to interact, form meaningful relationships with others, and maintain a support network. Social well-being emphasises positive personal and communal interactions based on mutual respect, cooperation, and interdependence (Strout & Howard, 2012). According to Fisher (2014), one's sense of belonging in their professional community is a key component of their true well-being,

despite the fact that organisational literature pays the least attention to this factor. One aspect of social well-being is experiencing both short- and long-term social fulfilment, as well as a sense of belonging to meaningful groups. Strong relationships with coworkers in an environment of mutual respect and trust are critical to eudaimonic well-being, since they promote personal development and career advancement (De Simone, 2014).

Additionally, when a leader cares for employees as individuals, employees tend to care more about the company they work for. Social well-being, therefore, includes both the pleasure of one's peers and the favourable interactions one has with leaders. Social assistance is another key idea, and it consists of two sub-concepts: emotional and material aid. In both giving and receiving, there is a correlation between giving, receiving and well-being. Having a sense of belonging and integration within one's team or the larger organisation may also contribute to one's social well-being at work.

Personal Well-being

Ryff and Keyes (1995) argue that the concept of personal well-being (PWB) lies in eudaimonism. Eudaimonism emphasised the importance of a person's psychological processes and having a good working mindset for the realisation of their full potential. Ryff and Keyes (1995) also suggested self-acceptance, progress, purpose in life, positive relationships, environment mastery, and autonomy as the six pillars of PWB. The idea of PWB can easily be adaptable to business contexts.

Eudaimonic well-being comprises work engagement, flourishing, flow, and intrinsic motivation, as well as finding meaning in one's work. To be actively involved at work, one must be strongly identified with their line of

work and base their identity and self-worth on it (Fisher, 2014). Work engagement here means an employee's productive mental state that is marked by vigour, devotion, and absorption. Vigour is the term for having a lot of energy and mental toughness when working. When someone is dedicated, they are deeply engrossed in their profession and feel a sense of challenge, excitement, and significance (Fisher, 2014).

Furthermore, Peng and Chen (2010) separated people's personal sense of well-being into two distinct categories by relying on their basis of stability and change. The categories are what people get out of life in the present and what they have built up through time. Having positive emotions or sensory experiences in the pursuit of personal value is an example of experiential well-being, while the accumulation of positive emotions or sensory experiences through time is an example of cumulative well-being (Peng & Chen, 2010). As people accumulate life experiences, they learn to integrate these two aspects of themselves. Well-being is less likely to occur if either of these conditions is lacking.

Again, a person is deemed to have reached personal well-being when they are entirely absorbed in and satisfied with their work, and as time goes on, they find it increasingly harder to put their work aside (Bakker & Demerouti, 2008). Those that are thriving have a firm belief that they are expanding and maturing towards their full potential, and they produce an enthusiastic, can-do spirit (Spreitzer & Sutcliffe, 2007). A person is considered to be "in the zone" when they are able to completely ignore their surroundings and use their skills to advance on a particularly difficult activity. This indicator may overlap with other types of well-being. Finding meaning in one's work is

dependent on completing one's duties competently, accomplishing one's goals, and enhancing one's skills, and this brings about personal well-being.

Financial Well-being

Financial well-being is the capacity to maintain current and expected ideal living standards and financial independence (Bruggen, Hogreve, Holmlund, Kabadayi, & Löfgren, 2017). The term financial well-being refers to a state of contentment with one's present and future financial situation due to prudent use of one's resources (Netemeyer, Warmath, Fernandes, & Lynch, 2018). Financial well-being can be defined in this context as an enterprise manager's psychological state towards their financial resources. In addition, it is a common belief that having financial knowledge, financial prowess, and making use of various financial resources and techniques leads to financial well-being (Sabri & Zakaria, 2015). However, Pricewaterhouse Coopers (PwC) provided a comprehensive definition of financial well-being as being able to meet one's financial obligations without undue worry or anxiety, learning to live within one's means, reducing one's reliance on debt, planning for and saving for one's future, and being able to retire if and when one so chooses (PwC, 2019).

To be financially secure, enterprise managers must be able to meet their financial obligations on time and have sufficient reserves and resources to weather unexpected financial setbacks. An enterprise manager who is financially sound is one who is able to take care of all of their immediate and long-term financial needs without difficulty, who is confident about their ability to provide for themselves in the future, and who has enough disposable income to pursue the things in life that bring them the most satisfaction

(Strömbäck, Lind, Skagerlund, Västfjäll & Tinghög, 2017). Confidence in one's ability to fund one's retirement and one's sense of security with one's current financial condition are employed as indicators of financial well-being, according to Riyazahmed (2021).

The concept of financial well-being, or how people feel about their personal financial status, is often used as the benchmark for assessing financial well-being. The subjective concept of financial well-being is typically broken down into two parts: (a) anxiety about one's current financial condition and (b) confidence in one's financial future (Lind et al., 2020; Netemeyer et al., 2018). Although a person's financial well-being is influenced by situations beyond their control, it can still provide insight into how they must make the most of their present financial condition (Barrafrem, Västfjäll, & Tinghögn, 2020). Netemeyer et al. (2018) also indicated that the size of the influence of perceived financial well-being on overall well-being is equivalent to the combined effect of other life domains such as job satisfaction, physical health assessment, and relationship support satisfaction.

According to Xiao (2016), the most often used subjective measure of financial well-being is financial contentment, which assesses the self-perceived total financial situation. Other subjective measures of financial well-being include income satisfaction, retirement savings sufficiency, and so on.

In a similar vein, Michael Collins and Urban (2020) asserted that having financial independence and the ability to achieve financial goals are both indicators of financial well-being. Mahendru (2020) described financial well-being as an individual's ability to promptly satisfy current and future financial commitments and requirements (financial security) and his or her

disposition towards financial independence today and tomorrow (financial freedom). According to Brügger et al. (2017), multiple variables have been found to influence financial well-being. Among these are:

A person's social and economic environment: The financial well-being of an individual or family can be affected by five distinct types of individual and/or family characteristics or behaviours: socioeconomic status, educational attainment, personality, financial habits, and/or life experiences. According to Brügger et al. (2017), these personal factors can positively impact one's financial well-being as well as reduce the efficacy of interventions designed to improve financial well-being or manage finances. One's financial well-being is affected by all of the personal elements that have been shown to matter in previous studies (e.g., one's self-efficacy, trustworthiness, value system, and the degree to which people compare themselves to others).

Similarly, socioeconomic factors influence financial well-being. Bucher-Koenen and Lusardi (2011) opine that women are as intelligent as men, but they are more hesitant to make financial decisions. Financial knowledge also influences men's financial satisfaction more than that of women (Gerrans, Speelman, & Campitelli 2014). Age influences wealth accumulation, hence influencing financial well-being (Binswanger and Carman 2012). Lusardi, Mitchell and Curto (2010) report that many young people lack fundamental financial knowledge, thereby affecting their financial well-being. Income, on the other hand, positively affects financial interest and results in increased savings rates (Beverly and Sherraden 1999). According to Binswanger and Carman (2012), higher education also increases wealth accumulation. Although ethnicity and culture have been studied less frequently than other

demographic factors, there is substantial evidence that they affect financial well-being (Brüggen et al., 2017).

A person's objective and subjective financial knowledge: An individual's financial knowledge can be defined as the body of information regarding financial concepts and products (Lind et al., 2020). This can be measured both objectively and subjectively through the use of knowledge-based questions and self-ratings of financial knowledge. Subjective financial knowledge, or confidence in one's ability to engage in a certain conduct, has also been demonstrated to be a significant motivator of behaviour in a range of financial circumstances (Farrel, Fry, & Risse, 2016; Robb Babiarz, Woodyard, & Seay, 2015). On the other hand, studies have measured financial knowledge objectively to explain financial well-being with indicators such as debt level (Xiao, 2016), time dimension and income level (DeNavas-Walt, Proctor, & Smith, 2013).

Self-control traits: To a large extent, one's financial well-being in life is determined by one's level of self-control, or the degree to which one is able to resist temptation and self-regulate undesirable financial behavioural tendencies (Strömbäck et al., 2020). According to research by Strömbäck et al. (2017), self-control traits are key factors in determining successful financial habits and outcomes. According to the tripartite paradigm, executive functions consist of (1) inhibition, (2) working memory, and (3) shifting, which influence monetary behaviour. Inhibition is the capacity to control one's attention, behaviour, thoughts, and emotions, such as continuing to work on a dull activity rather than engaging in something more rewarding and enjoyable. Working memory stores and refreshes information in a mental workspace, for

example, remembering and repeating a phone number. Shifting pertains to multitasking or switching between goal-relevant tasks. When stuck on an issue, shifting enables people to consider another's perspective (Strömbäck et al., 2020).

Information avoidance and financial ignorance: One definition of financial ignorance is the propensity to disregard or avoid obtaining publicly available information about personal finances (Barrafrem et al., 2020). For instance, people may choose to ignore relevant information (such as the costs associated with rolling over debts), facts that run counter to their hopes and beliefs (such as the effects of crises on the global economy), the cumulative effect of a series of seemingly insignificant actions (such as paying the minimum balance on a credit card each month), or even the need to make a decision at all.

On the contrary, people with less financial ignorance are more likely to be proactive in their personal money management, seek out, and implement strategies for dealing with reduced income, financial uncertainty, etc. To add to that, those who are financially literate may be better equipped to weather the storm than those who are not. While it is true that sometimes it is best to just ignore things, when it comes to one's financial well-being, burying one's head in the sand only makes things more precarious and hinders one's financial well-being (Barrafrem et al., 2020).

Measurement of Well-Being

In the context of this present study, well-being was operationalized in terms of the areas of enterprise managers' lives that are most likely to be influenced by a digitalization initiative or the digitalization of their enterprises. A survey questionnaire adapted from Netemeyer et al. (2018) and Kempson et

al. (2017) was developed and used as the instrument to collect data on financial and non-financial aspects of enterprise managers' well-being. The assessment of the well-being construct complemented existing well-being literature (Bruggen et al., 2017; Fisher, 2014; Michael Collins & Urban, 2020; PwC, 2019; Tuzovic & Kabadayi, 2020).

Intellectual Capital

Overreliance on the known factors of a production-based economy (land, capital and labour) of a firm without a substantial application of its intellectual capital to commensurate the prudent utilisation of these factors will amount to nothing in a knowledge-based economy as ours. Knowledge is implied to be the driving force behind every invention, implementation, and progression of any enterprise, as the saying "Knowledge is power" suggests. As a result, it is essential for the growth and prosperity of enterprises of all sizes and types, as well as their owners. It is therefore prudent to shed light on the intellectual capital construct alongside the dimensions.

Literature reveals that John Kenneth Galbraith coined the term intellectual capital in 1996 and defined it as the intellectual contributions of individuals that the individuals possess (Bellucci, Marzi, Orlando, & Ciampi, 2020). Stewart (1997) expanded this concept to encompass education, knowledge, information, expertise, intellectual property, and experiences that an organisation uses to generate wealth. Fast-forward, myriads of definitions of intellectual capital emerged from the view point of knowledge combination and experiences that influence a firm's value assessment (Abeysekera, 2021; Garcia-Perez, Ghio, Occhipinti & Verona, 2020; Khalique, Hina, Ramayah & bin Shaari, 2020).

Until now, prior economists have studied the firm's physical and human capital as vital resources for enabling productive and economic activities. Nonetheless, economists have recently come to acknowledge that knowledge in itself is a more useful resource (Nguyen, 2018). In view of this, Khalique, Bontis, Shaari, Yaacob and Ngah (2018) argue that since knowledge is the foundation of an organisation's intellectual capital, enterprises must learn to overcome significant obstacles in order to effectively utilise it as a competitive resource in the face of uncertainties and complexities.

For that reason, Senge (1990) argues that innovation-driven, high-performing enterprises generate intellectual capital from the accumulation of knowledge. Some researchers also posit that in building the value of a company, intellectual capital is the most important intangible factor (Nelson & Winter, 1982; Youndtet, Subramaniam, & Snell, 2004). Innovation-driven, high-performing enterprises generate intellectual capital through the accumulation of knowledge (Senge, 1990). In building a company's value, intellectual capital is the most important intangible component the firm uses. Hence, enterprise managers need adequate knowledge of intellectual capital in order to assist them in properly managing their enterprises to increase the worth of their firms.

In furtherance, the concept of intellectual capital originated from the human capital theory by explicitly linking knowledge to capital (Stewart, 2010). As a result, intellectual capital differentiates knowledge as a component of human capital theory by recognising knowledge as a resource for a company in a knowledge economy. The OECD (1996) defines a knowledge-based economy as a firm in which the development, transfer, and application

of knowledge serve as the primary engine for economic expansion, wealth generation, and job creation across all sectors of the economy, not just those classified as high-tech or knowledge-intensive. Businesses therefore thrive to maintain an edge in a knowledge-based economy by acquiring and applying unique knowledge and learning capabilities at a faster rate than their competitors (Grant, 1996; Prusak, 2001). A knowledgeable workforce is one of the most valuable resources an organisation can have in order to maintain a competitive advantage (Drucker, 1985; Grant, 1991; Khalique et al., 2011). Furthermore, Ramezan (2011) stated that one of an organisation's most significant assets is its knowledge.

The knowledge-based view of the organisation was most likely inspired by the belief that knowledge is the most important intangible asset of a firm that gives it a competitive advantage. Due to the intangible and ever-changing character of knowledge, knowledge-based resources are not subject to the same depreciation as conventional economic assets, as Khalique et al. (2013) point out. The knowledge-based view further emphasised the importance of knowledge as an enterprise asset for achieving strategic goals and making the most of available resources.

Inferring from this foundation, many scholars have begun defining intellectual capital from a knowledge perspective to incorporate those aspects of human capital that offer organisations a competitive advantage. According to Ramezan (2011) and Khalique et al. (2011), intellectual capital is composed primarily of knowledge and other intangible assets, including skills, competence, attitude, intellectual agility of employees, customer satisfaction, loyalty, network, infrastructure, system policies, procedures, innovation, social

value, faith, and honesty. Consequently, intellectual capital is a pivot of organisational talents that contributes to the creation and enhancement of organisational value and performance (Abdul Rahman & Abbas, 2015).

Similarly, organisational intellectual capital includes its intangible assets, such as trademarks, patents, and other forms of intellectual property that are not shown in its financial statements. Companies rely heavily on intellectual capital to keep their edge in the market (Dženopoljac, Janošević & Bontis (2016). According to Chaminade and Roberts (2003), intellectual capital is a collection of intangible assets or resources that include knowledge, databases, organisational structures, innovations, social values, faith, and honesty, as well as technical know-how, professional skills, and customer expertise. These can be used to provide value to an organisation and give it a competitive advantage.

This definition, as given by Chaminade and Roberts (2003), has a wide range of key elements worth considering. First, intellectual capital consists of intangible resources, such as knowledge and information, that a firm can employ to maximise its profitability. Second, it is the collection of intangible assets that is utilised to generate and establish value for a corporation. Third, the organisation does not own the human capital assets but can rent them out. For instance, the only way to obtain employee knowledge is to reward employees and ask them to share their knowledge. Fourth, the possession of these resources will not result in productive output unless they are effectively managed, and finally, optimally effective management can be leveraged to gain a competitive edge (Cohen & Kaimenakis, 2007; Mouritsen, 2006; Khalique, 2012).

Dimensions of Intellectual Capital

Several studies found support for the intellectual capital concept as a multidimensional concept (Asiaei, Bontis, Alizadeh, & Yaghoubi, 2022; Bellucci et al., 2020; McDowell, Peake, Coder, & Harris, 2018). However, whereas some studies provide five distinct dimensions (Harris, 2000; van Dijk, Hendriks & Romo-Leroux, 2016; Wiig, 1997), other studies support three dimensions (Ahmed, Bhatti, Gölgeci & Arslan, 2022; Bellucci et al., 2020; Karanja, 2014). Despite this contradiction in the literature concerning the most appropriate dimensions, the majority of the literature is in support of the three dimensions.

Also, in a recent study, McDowell et al. (2018) defined intellectual capital in terms of its dimensions as “the economic value of an organisation’s intangible assets, such as rational capital, organisational capital and human capital.” Ahmed et al. (2022) also measured intellectual capital using human, relational and organisational dimensions of intellectual capital. In a similar setting, Karanja (2014) measured intellectual capital in entrepreneurship by employing these three dimensions; hence, the present study employed human, relational and organisational dimensions of intellectual capital.

Human Intellectual Capital

Human capital can be defined as an organisation’s in-house resources for problem-solving and fostering stronger relationships with its clientele and supplier base (Mubarik, Chandran, & Devadason, 2018). Human capital is the sum total of an organisation’s employees’ knowledge, abilities, and experiences (Edvinsson, 1997). Human capital, according to Khalique, Nassir Shaari and Ageel (2011), is at the very core of intellectual capital. Human

capital, as discussed by Edvinsoon and Malone (1997) and Isaac, Herremans and Kline (2010), is the primary element of intellectual capital because it is founded on employees' knowledge, competence, skill, capability, and invention. Bontis (1998) suggested that human capital is seen as a source of innovation and strategic renewal at the organisational level.

Many academics, like Russo and Fouts (1997) and Mouritsen (2006), include intangibles like problem-solving skills, innovative ideas, and positive outlooks as components of human capital (Bontis, 1998). Scholars have contended that an organisation's productivity can be raised by investing in its employees' unique sets of skills, knowledge, and experiences (Baima, Forliano, Santoro, & Vrontis, 2020; Mahmood & Mubarik, 2020). Improved organisational effectiveness is a direct result of investing in employees' human capital by way of training and further education (Ahmed et al., 2022). According to Ding and Li (2010) and Khalique et al. (2011), a company's human capital consists of its workforce's collective skill set, which is essential to the company's long-term success. In most businesses, the people who work there are the most important factor in the development of new ideas and innovations (Ahmed et al., 2022).

In addition, human capital is widely acknowledged as a crucial part of intellectual capital, which is founded on competencies (such as education, professional skills, know-how, and experimental knowledge), attitudes (such as motivation, leadership, and behavioural patterns), and intellectual agility (such as innovation, creativity, flexibility, and adaptability) (Bontis, 1998; Tovstiga & Tulugurova, 2007). Competence, attitude, and intellectual agility are all factors that contribute to the creation of intellectual capital.

Competence, on the other hand, refers to a person's knowledge and ability to do a job, while attitude is based on the employee's behaviour in the workplace, and intellectual agility refers to their ability to think creatively and solve problems in the workplace.

Structural capital

Khalique et al. (2013) regarded structural capital as the glue that holds everything together in any organisation. Databases, organisational diagrams, procedure guides, strategies, procedures, and policies are just a few of the many examples of non-human knowledge repositories that make up this category (Bontis, Keow, & Richardson, 2000; Wu & Tsai, 2005). According to Roos (1998), structural capital is what remains in the company when employees go home after work. While it is true that businesses cannot really copy and paste their structural capital, Cohen and Kaimenakis (2007) claimed that some companies sometimes attempt to do so. Basically, structural capital consists of the foundation of an organisation, such as its systems, procedures, databases, networks, process manuals, and routines (Khalique et al., 2011). Mahmood and Mubarik (2020) conclude that all of an organisation's non-human knowledge resources are known collectively as its organisational capital.

According to Stewart (1997) and Shih, Liu, Jones and Lin (2010), structural capital creates an enabling setting in which human capital can be invested to generate and capitalise on new knowledge, giving businesses a competitive edge. Ramezan (2011) also provides a more detailed and convincing definition, as an organisation's ability to produce value-added goods and services is crucial to its success in the marketplace as a result of

structural capital. To quickly adjust to developments in the business climate, a company's organisational capital—its ability to pool and cultivate scarce resources—is essential. Integrating corporate processes is essential for making the most of available resources, adjusting organisational structures as needed, and putting company strategies into action (Liu & Jiang, 2020).

Additionally, Stewart (1997) argues that there are two uses for organisational capital. To prevent the loss of valuable institutional knowledge, the company must first establish a system for managing the flow of information within the company. The second objective is to facilitate real-time communication between various interested parties and relevant information providers (Ahmed et al., 2022). As many forms of transmission provide the basis for knowledge exchange, a streamlined business structure is essential. Organisations and individuals benefit from this since it facilitates communication between various parties and types of information (Harris, 2000). Therefore, the firm's organisational capital is an important asset and a component of intellectual capital (Hsu & Fang, 2009; Saxena, 2015).

Relational capital

Relational capital is also known among organisational researchers as customer capital due to the relevance of customer relations to an organisation. The relationship between a company and its clients or customers is the foundation of customer capital, an essential element of intellectual capital (Edvinsson & Malone, 1997; Tai-Ning et al., 2011). Ismail (2005) and Kim and Kumar (2009) explain that customer capital is founded on the expertise gained through an organisation's marketing channels and the relationships it builds with its clientele. Literature reveals that there is a positive correlation

between an organisation's success and its customer capital or relational capital as a result of its brand value, its client network, customer loyalty, and customer well-being (Ahmed, Bhatti, Gölgeci, & Arslan, 2022).

Similarly, Roos et al. (2001) emphasised that a company's relationship with its consumers is crucial to its success in a competitive market. Customers are undeniably a company's primary revenue generator. Accordingly, winning clients requires businesses to provide for their wants and needs (Tai-Ning et al., 2011). As a result, client capital is an essential ingredient of intangible assets, and it is built on three pillars: satisfied customers, loyal customers, and a robust network.

According to one definition, relational capital is "the degree to which individuals inside an organisation engage in productive social interactions that lead to the sharing of expertise and the acquisition of new information" (Carmeli & Azeroual, 2009, p. 88). Relational capital is therefore crucial in building connections between firms and their external stakeholders, such as suppliers and customers (Ahmed et al., 2022). As a result, it affects interactions within companies as well (Mahmood & Mubarik, 2020; Rezaei, Jafari-Sadeghi, & Bresciani, 2020). Relational capital refers to a company's ability to work closely with its most important business associates, who share a common goal and vision, as well as to build and maintain trusting connections with those associates.

Measurement of Intellectual Capital

Organisational capital, human capital, and relational capital all contribute to intellectual capital through indicators such as education, competencies, employee interactions, quality of information systems,

enterprise culture, dedication, support, etc. The study used twenty items derived from the measures developed by Chen et al. (2009) and Liu and Jiang (2020) to assess the organisational, human, and relational components of intellectual capital. Extant literature in entrepreneurship have used this measure to assess intellectual capital in the context SMEs. (Chen et al., 2009; Liu & Jiang, 2020).

Empirical Review

The literature review's empirical review section solely focused on assessing prior research on the study's primary variables. Previous studies have proven the connection between digital entrepreneurship, the well-being of enterprise managers, and intellectual capital. The insights learned from the literature review helped shape the study's trajectory and shed light on where the author agreed and disagreed with previous academics' assessments.

Digital Entrepreneurship and Owner-Managers' Financial Well-being

Research into the link between digital entrepreneurship and well-being has been the focus of researchers for some time now. However, only a sparse amount of these studies considered the digital entrepreneurship variable and financial well-being as dimensions. For instance, Yuniati and Mukhlis (2022) performed an in-depth study to better understand how financial resilience and financial efficacy influence the financial well-being of SMEs with an eye towards global markets. Their study was motivated by the fact that domestic markets were becoming increasingly congested, and that SMEs were not making the most of the potential presented by international markets. The researchers took a quantitative approach, collecting data through the use of surveys. Participants were enterprise owners from East Java, Indonesia. SEM-

PLS was used to analyse data collected through a questionnaire on 146 respondents.

The results showed that there was a positive correlation between entrepreneurial resilience and financial well-being. Although its effect is modest, entrepreneurs' financial efficacy has moderated the correlation between entrepreneurial resilience and financial well-being. Financial efficacy contributes to bolstering the connections between entrepreneurial resilience and financial well-being. This form of resilience has been shown to promote financial well-being despite exposure to job stresses and uncertain environments. Owners of SMEs who possess entrepreneurial resilience have been shown to be able to find opportunities. It was further revealed that owners who are equipped with financial efficacy tend to know how to access finance in banks and are able to get funding assistance from the government to maintain financial well-being despite adverse conditions.

The use of partial least squares structural equation modelling (PLS-SEM) as an analytical technique in this study deserves a great deal of praise since it enables analyses of mediation and moderation, as it was the focus of the study. However, digital entrepreneurship is a multidimensional variable; consequently, the various dimensions should have been investigated against the financial well-being variable so that the individual effects could be examined. This would have allowed for greater insight into the relationships between the two variables. It is possible that grouping them together to produce a composite variable will not reveal the full nature of the impact that construct has on one's financial well-being.

In a similar study, Yao and Da (2022) investigated the important financial variables (financial well-being and financial intelligence) and social capital components for the entrepreneurial goals and financial performances of 326 Chinese entrepreneurs. According to their findings, key financial indicators and social capital were found to have strong correlations with entrepreneur goals, which in turn significantly predicted financial well-being. Regarding the mediating linkages, there was a significant link between social capital, financial well-being, and entrepreneurial financial performance through entrepreneurs' ambitions to start businesses and their financial knowledge.

Findings from their study also demonstrated the importance of sustaining social capital, financial well-being, and financial intelligence in assisting aspiring entrepreneurs in achieving their financial goals. In addition, their findings could help business strategists estimate the financial competence of prospective enterprise owners. Once again, their study bolstered the existing body of knowledge by offering a comprehensive framework for analysing the factors that affect the financial well-being of enterprise owners through the established link. Although the scholars compared entrepreneurs' financial well-being to other factors, such as the performance of enterprises, the insights gleaned from their study are extremely valuable for this present study in terms of the holistic assessment of what constitutes the well-being of owner-managers.

In Houshmand and Schulz's (2016) published research, an analysis of the connection between starting a business and improving one's family's financial well-being was studied. The authors of the study argued that family

members' participation in a family firm has significant effects on the financial well-being of the enterprise. Four types of family involvement were hypothesised in the study: (1) direct involvement through self-employment; (2) indirect involvement through living with a self-employed relative; (3) direct and dependent involvement through working for a relative; and (4) family-level involvement in terms of the intensity of available work time that family members work in the business.

It was also investigated empirically how these four types of family involvement activities affect family income. For the analysis, the scholars drew on a massive data collection covering a time period of 28 years and found that involvement in family enterprises was found to have a beneficial impact on the entrepreneur's personal financial well-being, but no discernible impact on the financial well-being of the rest of the family was found. Again, there was a negative correlation discovered between the degree to which family members are involved in running the family business and their personal well-being.

Houshmand and Schulz's (2016) study offers important insights into the relationship between family involvement in business and financial well-being; however, it has notable limitations that warrant further investigation in the context of digital entrepreneurship. Firstly, the research primarily focuses on traditional family businesses, neglecting the unique dynamics of digital enterprises, which could significantly influence well-being. Secondly, while it assesses financial outcomes, it overlooks the constituents of financial well-being of enterprise owners and managers, an aspect crucial for sustainable enterprise success. Lastly, the study fails to address the role of intellectual

capital such as knowledge and skills in enhancing enterprise owners' well-being. A study that could fill these gaps by exploring how digital entrepreneurship and intellectual capital collectively impact the holistic well-being of business owners and their families will help provide actionable insights for supporting enterprise owners and managers in this evolving digital ecosystem.

Digital Entrepreneurship and Owner-Managers' Non-Financial Well-being

As established in the literature, the majority of studies on well-being consider the non-financial dimension of well-being. To examine the relationship between digital entrepreneurship and non-financial well-being, Wiklund, Nikolaev, Shir, Foo, and Bradley (2019) conducted a study to investigate the link between these two variables. The scholars started by providing a background on the well-being concept, the related studies, and the entrepreneurial context. As defined by the study's authors, entrepreneurial well-being includes feelings of contentment, good emotions, occasional negative emotions, and a healthy psyche as they pertain to the process of creating, launching, expanding, and managing an enterprise.

In furtherance, the scholars put forward the historical perspective of entrepreneurship and the broader subject of well-being in order to get a better grasp of the connections between the two and how the rise of digital entrepreneurship has altered well-being. The selection of recent social, technological, and institutional developments highlighted the significance of digital entrepreneurship to the study of well-being in other domains. Each of the eight articles reviewed in this study focused on different aspects of

entrepreneurial well-being, providing a unique theoretical and methodological lens through which the factors that contribute to and mitigate against well-being in the entrepreneurial context can be examined. Aspects of entrepreneurs' well-being, such as eudaimonic and negative aspects of well-being, and positive aspects of well-being like health and the ability to recover from challenges, were studied.

This foundational study on entrepreneurs' well-being and digital entrepreneurship is relevant, but its limitations indicate the need for further research. The study's focus on history seems to overlook current factors in digital entrepreneurship, such as technology's rapid growth and its psychological consequences for entrepreneurs. The study also analysed eight publications on well-being, but there is no evidence linking these features to modern digital entrepreneurial activity, limiting its applicability to today's entrepreneurs. Today's fast-paced digital ecosystem necessitates a more linked approach to understanding enterprise owner-manager's well-being and intellectual capital in digital entrepreneurship, as well-being is fluid and multifaceted.

In a similar study, Kipkosgei (2022) examined how the well-being of the entrepreneur mediated the relationship between perceived entrepreneurship stress and entrepreneur resilience and how the entrepreneur's perception of online social support moderated the strength of this association. Considered entrepreneurial centres in Kenya were studied based on survey data received from 204 entrepreneurs in two main cities in the country. This connection was found using confirmatory factor analysis to examine the measurement model's ability to discriminate between groups. The study employed hierarchical

multiple regression to quantify direct, indirect, and mediating effects across four hypotheses in seven models.

The results indicated a negative correlation between entrepreneurs' stress and their well-being and a positive correlation between entrepreneurs' well-being and resilience. Their sense of social support in their online communities had a positive influence on the relationship between entrepreneurs' wellbeing and their capacity to bounce back from setbacks. The study tested the mediation effects through a bootstrapping analysis to confirm the indirect effect. The indirect bootstrapping test results show that the entrepreneurs' sense of well-being mediates the relationship between their levels of perceived stress and their ability to overcome adversity. Furthermore, the study concludes that entrepreneurs can find the kind of social support they need to weather crises by engaging in activities such as joining and contributing to online communities. This, in turn, can help entrepreneurs generally become more resilient in the face of adversity. The adoption of PLS-SEM as an analytical tool for a study of this nature is also applaudable.

This study crucially examined the role of online social support in the relationship between enterprise managers' well-being and entrepreneurship, as opposed to digital entrepreneurship. PLS-SEM was used to analyse the study variables, which is commendable. Kenya might have an entrepreneurial climate that necessitates these interactions, as evidenced by the observed components. Conversely, Ghana may also have a unique corporate culture that skews results. Studying the impact of digital entrepreneurship on non-financial well-being will reveal a sharper effect. This study aims to fill this gap by

examining the impact of digital entrepreneurship dimensions on non-financial well-being.

Digital Entrepreneurship and Intellectual Capital

There is a growing body of literature dedicated to the topic of digital entrepreneurship, despite the fact that it is still a relatively new phenomenon. Consequently, the relationship between the construct and intellectual capital has not been the subject of extensive empirical study. From a narrower viewpoint, academics have paid a lot of attention to the empirical evidence connecting human capital and entrepreneurship (Allen, Link, & Rosenbaum, 2007; Dutta & Sobel, 2018; Faggian, Partridge, & Malecki, 2017; Marvel, Davis, & Sproul, 2016). The academics cited above argue that human capital is crucial to the success of entrepreneurship. The authors' focus on human capital as a type of intellectual capital is instructive, but the present investigation can also benefit from other insights learned from their work. Again, they overlooked digital and online enterprises in favour of the more conventional variety. The current research focuses on filling in these voids.

To understand the connection between intellectual capital (IC) and entrepreneurship, Crupi, Cesaroni and Di Minin (2020) steered a study in this regard. In order to examine a comprehensive data set of IC and entrepreneurship papers, their research relied on co-citation analysis and bibliographic coupling approaches. Based on the results of a co-citation analysis, the researchers identified five primary theoretical building blocks in the IC and entrepreneurship literature. These building blocks covered both the fundamentals of IC and more advanced topics within the field (family firms and the measurement of IC). The bibliographic coupling study also revealed

that there are interactions and synergies between the various parts of IC, which should be taken into account in future research.

To better understand the phenomenon, Crupi et al. (2020) used a qualitative method, although a quantitative study using PLS-SEM might have yielded more insightful findings. Scholars have claimed that the PLS-SEM is a powerful analytical tool for understanding the interplay between many factors, like digital entrepreneurship and intellectual capital. This research was also not carried out in a Ghanaian context. Enterprise managers in Ghana who are adopting digital tools in an effort to digitalize their businesses will greatly benefit from thinking about the phenomenon in the context of Ghana, where many entrepreneurs are making a greater impact through digitalization than through the traditional entrepreneurial system. The study has notable limitations that underscore the necessity for more recent research in digital entrepreneurship, enterprise owner-manager well-being, and intellectual capital. Firstly, the reliance on qualitative methods, while insightful, may lack the robustness of quantitative analyses such as PLS-SEM, which could provide deeper insights into the complex interactions between digital entrepreneurship and intellectual capital. Secondly, the research did not consider Ghana's specific context, where unique entrepreneurial dynamics and digitalization efforts could yield different findings and implications, particularly for enterprise managers adapting to digital tools. These gaps highlight the need for updated studies that address these contexts and methodologies to better inform the evolving need for digital entrepreneurship.

Additionally, Khan, Shuangjie, Khan, and Anwar (2019) carried out an empirical study to look into the connections between the financial and non-

financial performance of SMEs in Pakistan's emerging market and three crucial internal capabilities: an entrepreneurial orientation, the capacity to use information technology effectively, and the presence of significant intellectual capital. Using a total of 307 SMEs to compile data with self-reported questionnaires, SEM was also employed via AMOS 21 to address the study hypotheses. The result shows that both financial and non-financial performance are significantly influenced by an organisation's entrepreneurial orientation, IT capabilities, and intellectual capital.

Regrettably, the researchers neglected to examine the digital dimension of entrepreneurship, disregarding the crucial elements of digital entrepreneurship that may have offered a valuable explanation for the relationship between the factors. Once again, the study focused on phenomena within a westernized context, neglecting literature on developing economies such as Ghana. Furthermore, we examined the variables of entrepreneurship and intellectual capital in relation to the firm's performance, a topic that has received extensive research in this field. This study addressed this limitation by conducting a comparison between these study factors and enterprise managers' well-being. In light of these circumstances, the use of structural equation modeling (SEM) in the examination of the study variables aligns with the current body of literature.

On digital entrepreneurship, Muafi, Syafri, Prabowo and Nur (2021) examined the variable in relation to human capital. In their study, they came up with a way to understand digital entrepreneurship. It has four parts: motivation (the reason why academic entrepreneurs use digital technology), stakeholders (the people who help them reach their goals through digital

technology), opportunities (the chances that come with using digital technology for academic entrepreneurship), and process (the new way that academic entrepreneurs do things). The study used these variables to elucidate the relationship between digital entrepreneurship and human capital. However, the study's conclusion was unclear. The study utilised a qualitative methodology, which precluded the examination of both direct and indirect impacts in conjunction with the link. The term human capital was employed instead of intellectual capital, which would have allowed for a more comprehensive analysis.

Intellectual Capital and Owner-Managers' Financial Well-being

In this part, the researcher considered works from a real-world perspective concerning the link between intellectual capital and financial well-being. As was shown before, the vast majority of studies focused on non-financial aspects of well-being, whereas virtually none of them focused on financial well-being. Once more, authors shifted their attention from demonstrating the link between intellectual capital and other organisational variables like enterprise managers' well-being to determining how to measure intellectual capital.

Nonetheless, in a recent study, Gross-Goacka et al. (2021) used a dataset of 1067 Polish companies (with at least 10 employees) to compare and contrast the understanding of intellectual capital among managers of small, medium, and big businesses in Poland. An analysis of variance for fuzzy numbers (FANOVA) was used to check the study's hypotheses. The survey indicated that managers understand the nature and value of intellectual capital but that most Polish businesses do not use intellectual capital management

practices. There was also no statistically significant difference in managers' responses after controlling for company size.

Gross-Goacka et al.'s (2021) study investigated the perspective of managers of SMEs in regard to intellectual capital, which gave significant insight for guiding this present study as one of its objectives was to investigate the role of intellectual capital in digital entrepreneurship and the enterprise manager's well-being nexus. Gross-Goacka et al.'s (2021) study on Polish managers' intellectual capital is useful, but its limits suggest more research on digital entrepreneurship and firm owner-manager well-being. The study used a dataset limited to Polish enterprises, which limits its applicability to other cultural and economic environments, such as Ghana. Despite the emphasis on FANOVA, the absence of partial least squares structural equation modelling (PLS-SEM) poses a significant disadvantage. PLS-SEM is better suited for analyzing complicated interactions between variables like intellectual capital and employee satisfaction. This methodological gap shows that intellectual capital dynamics in manager well-being and digital entrepreneurship are understudied and require a more complete study utilising advanced analytical methods in varied situations.

Additionally, Akhtar, Ismail, Ndaliman, Hussain and Haider (2015) used data from the Federation of Malaysian Manufacturers' database to collect data on a sample of SMEs and examine the contribution of intellectual capital to long-term success. There was a response rate of 51% from the 335 people who were sent the surveys to fill out on their own time. According to the study's findings, intellectual capital has a major impact on the long-term sustainability of SMEs.

In addition, the multiple regression analysis employed by Akhtar et al. (2015) showed that the knowledge and innovativeness components of intellectual capital are more important for ensuring a company's long-term viability. However, in the context of Malaysia, the competences, intellectual agility, and abilities of employees have been determined to be negligible. The findings indicate that failure will occur if the intellectual capital of the workforce is not fully used. Their study adds value not just for SME owners and managers but also for policymakers.

Akhtar et al.'s (2015) study on intellectual capital and SMEs' long-term sustainability is useful, but its limitations highlight the need for more contemporary digital entrepreneurship research. SME responses were 51%, raising concerns regarding representativeness and skewing results. Instead of structural equation modelling (SEM), Pearson correlation and regression analysis make it harder to understand how different parts of intellectual capital, such as knowledge and innovativeness, interact with each other. The study also ignores business owners and managers' non-financial well-being, which is essential for organisational health. Finally, the contextual differences between Malaysia and other economies, such as Ghana, suggest that the findings may not be universally relevant, emphasising the need for new research that analyses these variables in varied entrepreneurial environments.

Intellectual Capital and Owner-Managers' Non-Financial Well-being

Since the majority of studies focus on human capital and well-being, the connection between intellectual capital and non-financial aspects of well-being has not received a significant amount of attention in the organisational literature. Scholars have already established that human capital is merely a

subset of intellectual capital. This is because the authors have defined intellectual capital as a broad concept consisting of an enterprise's intangible assets. That notwithstanding, Makarov, Aivazyan, Afanasiev, Bakhtizin and Nanavyan (2014), in a Russian context, used a methodology to build models of the productive potential of the regions of the Russian Federation, with estimates of the knowledge economy as intellectual capital. They discovered insightful relationships between intellectual capital and well-being.

Makarov et al. (2014) focused on enlightening readers on the significance of well-being attributes to quality of life in influencing regional production efficiency as a macroeconomic variable in the Russian economy. This research did not apply the concepts of intellectual capital and well-being to an entrepreneurial setting. The study focused on the characteristics of innovation readiness, well-being, and quality of life, rather than examining the impact of innovation readiness, a component of intellectual capital, on employees' well-being. Consequently, it was unable to draw any definitive conclusions about the relationship between these factors. Because this was a qualitative study, SEM was not an option for analyzing the data. Furthermore, given the strength of the Russian economy, it may not be appropriate to apply these results to a country like Ghana, which is still in the process of growing its economy.

In a related study, Hussi (2003) conducted an analysis of intellectual capital through the lens of expert interviews, using MWA as a reference point. The framework took into account not only the physical well-being of workers, but also their skill sets, the nature of their workplace, and the safety of their surroundings. According to the findings, intellectual capital has had the

greatest impact on competence, causing a shift in emphasis from individuals' skills to the group as a whole. Husin (2003) identified shifts in the nature of employment, the nature of the workforce, and the well-being of workers as driving factors. According to their research, the well-being of the company's employees controls the effective management of these four processes, which in turn determines the success of knowledge creation.

In an entrepreneurial context, Berraies, Lajili, and Chtioui (2020) used social capital as a form of capital against employee well-being and knowledge sharing. As intellectual capital is defined as the intangible assets of a business that offer it a competitive edge over other enterprises, knowledge sharing in this study might be compared to intellectual capital. Specifically, the scholars examined how enterprises' social capital mediated the connection between knowledge sharing and worker satisfaction. Berraies et al. also wanted to see how structural, relational, and cognitive forms of social capital affected the strength of the link between knowledge sharing and employees' well-being. The research was quantitative in nature, with 168 middle managers from Tunisian enterprises that rely heavily on intellectual capital serving as the study's sample. The data analysis using partial least squares demonstrated that employees' well-being acted as a mediator in the relationship between structural and relational social capital and knowledge sharing. The results also demonstrated that the use of workplace social networks had a favourable and significant effect on information sharing, despite not mediating the relationship between employee well-being and knowledge sharing.

This study sheds light on social capital, employee well-being, and knowledge sharing in knowledge-intensive firms, but its limitations highlight

the need for more recent research on digital entrepreneurship, enterprise owner-manager well-being, and intellectual capital. The study's concentration on Tunisian middle managers limits its applicability to other circumstances, such as digital entrepreneurship in other cultures. In addition, the study ties information sharing to intellectual capital but does not analyse its components and their effects on owner-manager well-being in digital business. A recent study could address these limitations by including digital entrepreneurs from various countries, focusing on enterprise owner-managers' well-being, analysing intellectual capital components more thoroughly, and using a robust analytical tool like the PLS-SEM to capture the complexities of all forms of capital and well-being in digital entrepreneurship ecosystem.

Mediation Role of Intellectual Capital on the Nexus between Digital Entrepreneurship and Owner-Managers' Financial Well-being

It appears in the literature on intellectual capital and financial well-being that studies have not established any clear link between the sum total of an enterprise's intangible assets and its financial quality of state. The majority of studies on these variables have restricted their scope to human capital and well-being (Galabova & McKie, 2013; Liu, Modrek & Sieverding, 2019), intellectual capital and general well-being (Hussi et al., 2003; Makarov et al., 2014), social capital and financial well-being (Yao & Da, 2022), psychological capital and well-being (Youssef Morgan & Luthans, 2015), and social capital, employee well-being, and knowledge sharing as a substitute for intellectual capital (Berraies et al., 2020).

The paucity of literature in this area suggests a lack of studies clearly establishing the mediating role of intellectual capital in the relationship

between digital entrepreneurship and financial well-being. That notwithstanding, the dimensions of digital entrepreneurship (leadership, knowledge and creativity) are known to be the driving forces of entrepreneurial success in any business entity (Anwar & Daniel, 2016; Pejic Bach et al., 2018). Muafi et al. (2021) also assert that digital entrepreneurship, with its advanced technological tools, has a role in shaping the human capital of any institution. More specifically, Khan et al. (2019) investigated the relationship between the financial and non-financial well-being of SMEs in Pakistan and found that an organisation's entrepreneurial orientation, information technological capabilities, and intellectual capital significantly influence both financial and non-financial performance.

Additionally, Nelson and Winter (1982) and Youndtet et al. (2004) posit that in building the value of a company, intellectual capital is the most important intangible factor. This suggests that we could enhance the role of intellectual capital in the association between digital entrepreneurship and the financial well-being of managers. Ramezan (2011) and Khalique et al. (2011) assert that knowledge and other intangible assets, such as skills, competence, attitude, intellectual agility of employees, customer satisfaction, loyalty, network, infrastructure, system policies, procedures, innovation, social value, faith, and honesty, primarily comprise intellectual capital. The presence of these qualities in digital entrepreneurship and the financial well-being of managers could help expand the enterprise, thereby leading to economies of scale that might lead to improved monetary well-being. Abdul Rahman and Abbas (2015) added that intellectual capital is the pivot of organisational

talents that contributes to the creation and enhancement of organisational value and performance.

Mediation of Intellectual Capital on Digital Entrepreneurship and Owner-Managers' Non-Financial Well-being

While studies on intellectual capital are still in their early stages, inferences can be drawn from its characteristics to promote organisational outcomes through the lens of mediation. Apparently, no enterprise can survive without the vital role of human capital. A firm's human capital predicts its ability to be knowledge-economy-intensive. This is a representation of the intellectual capital present in the enterprise, as well as all other intangible assets that provide the firm with a unique identity, making it distinct from other firms in the industry. In light of this, the mediating role of intellectual capital in the association between digital entrepreneurship and the well-being of enterprise managers will make a meaningful addition to the literature.

In order to establish a link between entrepreneurship, intellectual capital, and well-being, Berraies et al. (2020) employed social capital as a form of capital alongside employee well-being and knowledge sharing, as this study could link knowledge sharing to intellectual capital. Similarly, Yuniati and Mukhlis's (2022) study offered a better understanding of how financial resilience and financial efficacy influence the financial well-being of SMEs in a global market where the digitalization of entrepreneurial activities is paramount. Despite the study's lack of explicit consideration of intellectual capital's mediating role in the relationship between these variables, it suggests that enterprise managers, who drive digitalization, function similarly to the human capital enterprises require to survive.

As a result, it is reasonable to assume that the stresses associated with making heavy use of technical resources and contributing significantly to an enterprise's performance through their human capital could have a significant negative impact on the well-being of the enterprise's managers and employees. The potential contribution of intellectual capital could now give the enterprise a better outlook in the face of its difficulties. Wiklund et al. (2019) established a link between digital entrepreneurship and well-being by revealing that the role of entrepreneurship in the fulfilment of the well-being of employees is of utmost importance to many enterprises. If this is the case, then it seems to suggest that intellectual capital can make a significant contribution to an enterprise's digital agenda, hence improving the well-being of its managers and employees. However, Wiklund et al. did not consider the mediating role of intellectual capital in the relationship between digital entrepreneurship and non-financial well-being.

Lessons Learnt from the Literature Review

Considering the insights gleaned from the literature review, the preceding empirical assessment revealed that the bulk of the studies examined were based on varying theoretical underpinnings such as human capital theory (Dutta & Sobel, 2018; Marvel et al., 2016), social capital theory (Berraies et al., 2020; Yao & Da, 2022), self-determination theory (Yuniati & Mukhlis, 2022), intellectual capital theory and resource-based theory (Crupi et al., 2020; Khan et al., 2019). This is likely due to their acceptance in the literature, as they appear to be the primary theories that explain the significant contribution of digital entrepreneurship in fostering employee overall well-being and SMEs' intellectual capital. Based on the lessons gleaned, the researcher

reviewed Schumpeter's innovation theory and Job Demands-Resources Model in addition to the above-listed theories to comprehensively provide a strong foundational basis for the study variables. Furthermore, Asia (Khan et al., 2019; Muafi et al., 2021; Yao & Da, 2022) and Europe (Gross-Goacka et al., 2021; Makarov et al., 2014) conducted the majority of the research, with only a sparse number in Africa (Berraies et al., 2020; Kipkosgei, 2022), raising concerns about applying their findings to digital entrepreneurship and well-being in SMEs in African countries like Ghana.

In terms of methodology, the studies were primarily quantitative, with different designs and questionnaires graded on a five-, seven-, and nine-point Likert scale. However, the primary motivation for any design's widespread adoption was to get results applied to representative proportions of the population in each circumstance. Most studies (Berraies et al., 2020; Yao & Da, 2022) selected participants from homogeneous communities, primarily SMEs, using purposive and snowball sampling techniques. Some studies also employed a qualitative approach through co-citation analysis and bibliographic coupling techniques (Crupi et al., 2020; Muafi, 2021). In some circumstances, researchers adopted other sampling procedures, such as simple random sampling (Pejic Bach et al., 2018). Some studies (Berraies et al., 2020; Yuniati & Mukhlis, 2022) also conducted tests for reliability and validity.

Previous researchers utilised structural equation modelling as their primary statistical methodology for data analysis, while others used correlation, regression and other statistical methods to examine the direction and strength of correlations among the variables of interest (Khan et al., 2019; Yuniati & Mukhlis, 2022). The regression analysis employed multiple

regression approaches, including hierarchical regression (Kipkosgei, 2022). Although there appears to be no consensus on how to measure digital entrepreneurship, SMEs managers' well-being, and intellectual capital constructs, the available literature provided great insight into adapting a scale for the respective constructs. The lessons learned guided the formulation of the problem statement, the theoretical framework, the conceptual framework, and the methodological sections of this study.

Conceptual Framework

This section of the study presents the conceptual framework, which hinges on the objectives of the research. The ability of researchers to illustrate their concepts in a manner that facilitates simple comprehension is one of the most crucial aspects of any research. Figure 2 depicts the conceptual framework for this study, which is based on its primary purpose and objectives.

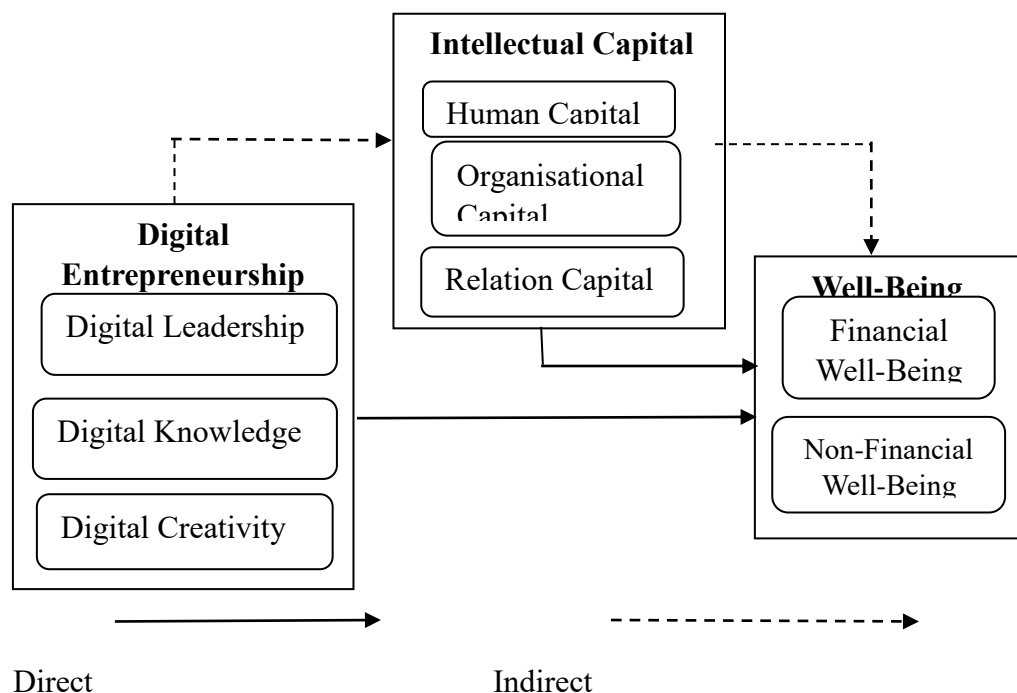


Figure 2: Conceptual framework of the study

Source: Author's construct (2022), based on views from the literature

According to Guntur (2019), the conceptual framework serves as the template for any research endeavour, providing shape and direction to the concepts given in the study. Grant and Osanloo (2014) emphasised the significance of a conceptual framework, stating that it serves as the foundation for all subsequent research.

Considering the insights gleaned from the literature review, the preceding empirical assessment revealed that the bulk of the studies examined were based on varying theoretical underpinnings such as human capital theory (Dutta & Sobel, 2018; Marvel et al., 2016), social capital theory (Berraies et al., 2020; Yao & Da, 2022), self-determination theory (Yuniati & Mukhlis, 2022), and intellectual capital theory and resource-based theory (Crupi et al., 2020; Khan et al., 2019). This is most likely due to their acceptance in the literature since they seem to be the main theories used to explain the significant contribution of digital entrepreneurship in fostering employee overall well-being and SMEs intellectual capital. Furthermore, the majority of the research was conducted in Asia (Khan et al., 2019; Muafi et al., 2021; Yao & Da, 2022) and Europe (Gross-Goacka et al., 2021; Makarov et al., 2014), with only a sparse of them in Africa (Berraies et al., 2020; Kipkosgei, 2022), raising concerns about applying their results to digital entrepreneurship and well-being in SMEs in African countries like Ghana.

Drawing inferences from the TACT, digitization of SMEs comes with affordances and constraints (i.e., dynamic interactions between people, enterprises, and technologies), which impact the SMEs managers' overall well-being. In light of this, the conceptual framework as shown in Figure 2 reveals that a relationship exists between digital entrepreneurship (digital

leadership, digital knowledge and digital creativity) and enterprise managers' well-being (financial and non-financial well-being). In addition, the framework shows that a relationship exists between digital entrepreneurship (digital leadership, digital knowledge and digital creativity) and intellectual capital. This relationship was also informed by the DCV, which posits that SMEs can use digital tools to create and sustain a competitive advantage with their available resources (i.e., intellectual capital).

Also, the study leverages the Schumpeter's theory of innovation to explain the role of technological advancements in shaping the entrepreneur's competencies in crafting new combinations that yield both satisfaction and profits. This theory advocates for the integration of digital entrepreneurship as a fundamental aspect of entrepreneurial activities, enhancing owner-managers' intellectual capital and technical skills, and thus providing a competitive edge over rivals. Emphasising digital entrepreneurship is critical for equipping entrepreneurs with the technical expertise needed to navigate the complexities of contemporary businesses, which facilitates business growth and job wealth creation. Furthermore, the application of digital tools, platforms, and artefacts in innovating business operations empowers entrepreneurs to develop the skills and knowledge necessary for innovation (Nambisan, 2022). Consequently, entrepreneurs are better positioned to identify opportunities, tackle challenges, and adeptly manage the dynamic process of creative destruction, ultimately fostering growth.

Furthermore, the framework indicates that SMEs intellectual capital mediates digital entrepreneurship and their managers' well-being nexus. Based on the model, the conceptualization, therefore, assumes that the relationship

between the three dimensions of digital entrepreneurship (digital leadership, digital knowledge and digital creativity) and the two dimensions of SMEs managers' well-being (financial and non-financial well-being) will be mediated by the enterprise's intellectual capital. This idea was informed by the intellectual theory, which proposes that the RBV assists SMEs facing a variety of constraints to use their existing resources and opportunities in the most efficient manner possible to achieve the greatest results through the use of modern digital tools.

Additionally, the link between digital entrepreneurship and entrepreneurs' well-being is increasingly evident through the lens of the Job Demands-Resources (JD-R) model, which posits that the availability of job resources, particularly digital tools and platforms, enhances work engagement and overall well-being among entrepreneurs (Paul et al., 2023; Wang et al., 2023). Digital resources facilitate the automation of business processes, significantly reducing the reliance on manual operations and alleviating the stress associated with traditional business models.

As Bakker and Demerouti (2014) suggest, the burdensome tasks inherent in conventional practices can escalate job demands, negatively impacting entrepreneurs' well-being. However, equipped with adequate resources, human, technological, structural, relational, and financial, entrepreneurs can manage their enterprises more effectively, resulting in lower stress levels and improved well-being. Moreover, job resources can mitigate the adverse effects of job demands on strain and health outcomes (Bakker, Demerouti, & Euwema, 2005). Therefore, embracing digital entrepreneurship not only equips entrepreneurs with essential technical skills but also fosters a

supportive environment that enhances their ability to navigate challenges, ultimately contributing to their psychological resilience and overall well-being. In sum, the framework shows that SMEs managers' overall well-being will be improved based on the enhancement of their intellectual capital as a result of the use of digital entrepreneurial technologies.

Chapter Summary

The chapter concentrated on providing information concerning the literature review. Key thematic areas included theoretical, conceptual, empirical review and conceptual frameworks. The literature review was guided by the nature of the concepts under consideration, the nature of the purported relationship among the concepts, the theoretical underpinning and the general purpose of the study. The present study includes the researchers' results, causes, and suggestions to expand the literature on digital entrepreneurship, SMEs managers' well-being, and intellectual capital in a Ghanaian environment.

CHAPTER THREE

RESEARCH METHODS

Introduction

This research looks at how intellectual capital acts as a mediator between digital entrepreneurship and the well-being of SMEs' managers in Ghana. The methods used during the research are detailed in this chapter. Research philosophy, research approach, research design, study area, population, sample and sampling procedures utilized, data collection instrument, data gathering procedure, data processing and analysis, and a chapter summary are all covered in this chapter. The study's research method is a compilation of these several subtopics, which made it easier to respond to the research hypotheses formulated. The instrument used in collecting data was also analysed for its validity and reliability.

Research Philosophy

Many philosophical perspectives have shaped the methodology, foci, and direction of social science research. Five important philosophies, including pragmatism, positivism, critical realism, interpretivism, and postmodernism, have affected social science research over the years (Saunders, Lewis, & Thornhill, 2016). The authors argue that all research philosophies add something unique and helpful to the researchers' investigation. As a result, qualitative, quantitative, and mixed methods approach to research are often quite robust, as they are the outcome of the philosophies of the individual researchers themselves (Creswell, 2014). The present study aligned with the positivists' research paradigm.

Reichardt and Rallis (1994) argue that the positivist paradigm in the social sciences, while highly prominent, was ultimately replaced by post positivism before World War II because of several objections. Post-positivists have responded to these issues while upholding the fundamental ideas of positivism. They recognise the presence of different realities but prioritise the quest of objectivity. They advocate for researcher impartiality by following strict processes to avoid the effect of personal values or biases (Aryal, 2023). The research methodology for this study was based on the post-positivist paradigm. Post-positivism recognises the intricate and situational characteristics of social phenomena, and therefore utilises quantitative approaches to elucidate the connections between digital entrepreneurship, intellectual capital, and wellbeing (Phillips & Burbules, 2000).

This paradigm acknowledges the existence of an objective reality, but also acknowledges that our comprehension of it is unavoidably shaped by human perceptions and social situations (Creswell & Poth, 2018). Therefore, this method will utilise structured questionnaires to collect measurable data on the well-being of SMEs owner-managers. The research seeks to adopt a post-positivist perspective to generate a thorough and strong analysis that effectively addresses the research questions, resulting in findings that may be applied to a wider context.

Considering that this present study utilised the Technology Affordances and Constraints Theory (TACT), Dynamic Capabilities View (DCV), and Intellectual Capital Theory (ICT) as its theoretical underpinnings, all these theories lend support to the positivists' paradigm. In addition, the positivists

ideology was employed over the other research philosophies due to the study's underlying philosophy.

Research Approach

There are three main types of research approaches that have been identified in the literature and are widely employed by researchers to learn more about specific phenomena. According to Saunders et al. (2016) and Sekaran and Bougie (2016), quantitative, qualitative, and mixed methodologies constitute the trinity of most often employed approaches. Researchers may disagree on which approach or methodology is superior, but they may agree on the importance of selecting the appropriate one for any given study (Saunders et al., 2016). Denzin and Lincoln (2006) state that the goal of a quantitative approach is to collect numerical data, examine it in accordance with numerical principles, and develop conclusions based on the results. This strategy is used to randomly collect and analyse descriptive and causal correlations between variables, all while adhering to strict statistical standards that allow for generalization of the conclusions (Saunders et al., 2016). Furthermore, a quantitative approach is a technique for logically and sensibly questioning, validating, and acknowledging variables.

The focus of a qualitative approach, in contrast, is on how to investigate a phenomenon when researchers are not necessarily interested in generalizing their findings to a larger group of people. The qualitative method refers to a way of researching and interpreting the meaning that individuals or groups ascribe to a given social or cultural phenomenon (Creswell, 2014). According to Daymon and Holloway (2010), the term qualitative approach

refers to a methodology or strategy aimed at helping researchers better understand the physical and social backgrounds of people.

According to Creswell (2014), mixed-methods research involves combining qualitative and quantitative philosophical methodologies so that evidence can be blended and will boost the knowledge acquired on a specific subject. According to Saunders et al. (2016), mixed methods produce more trustworthy results and thorough explanations of research questions and hypotheses. Its goal is to lessen the restrictions placed on research due to methodological issues with qualitative and/or quantitative approaches. When combined, “researchers can effectively generalise outcomes from a sample to a population and gain a deeper understanding of the issues of interest” (Creswell & Plano-Clark, 2007, p. 224).

The current research followed a positivist, scientific process predicated on the testing of hypotheses and hence depended on a quantitative research approach or methodology. In keeping with the aforementioned assumption, Johnson and Onwuegbuzi (2004) state that quantitative researchers believe that it is crucial for researchers to present their research questions or hypotheses and then test them with empirical data to ascertain if they are supported or not (Johnson & Onwuegbuzie, 2004). This method also enables the use of inferential statistics (Tashakkori & Teddlie, 2003). Because of the specifics of the intended outcome, this study employed a quantitative methodology.

Research Design

A research design acts as a plan of action, detailing how the required data will be obtained, collected, and analysed to address the study’s

hypotheses or research questions (Grey, 2014). A study design, as stated by Sekaran and Bougie (2016), is a roadmap that details how researchers intend to collect, evaluate, and analyse data for their study. Van Wyk and Taole (2015) assert that it is crucial for researchers to carefully consider potential research designs to ensure that all the study's elements work together well. Blanche et al. (2006) also cautions that researchers should carefully think about whether the primary purpose of their study is exploratory, descriptive, or explanatory when deciding on the choice of a research design. This will help them choose the most suitable research design to adopt for their study.

Due to its importance in social science research and its broad ability to depict the totality of realities, the researcher adopted an explanatory research design for this present study (Hook, 2004). When a study's purpose is to provide an explanation of existing patterns of association or causality between variables, an explanatory research design is typically employed (Bektas & Nalcaci, 2012). Additionally, it can be applied to the analysis of a given problem or situation in order to reveal the interrelationships among the many variables of interest involved in a study (Creswell, 2014).

According to Yin (2014), the goals of causal research or explanatory research are (a) to identify which variables are causes and which are effects, and (b) to establish a connection between the causal factors and the outcome that is to be expected. Similarly, these goals are in line with the objectives set for this study. To achieve these objectives, the researcher adopted an explanatory research design to collect data to show how digital entrepreneurship affects the well-being of SME managers and how intellectual capital mediates the nexus between these two variables. According to Singh

(2006), this kind of research design provides a more complete picture of the links among the many variables under investigation. The study was a cross-sectional survey where data was collected at varied points in time.

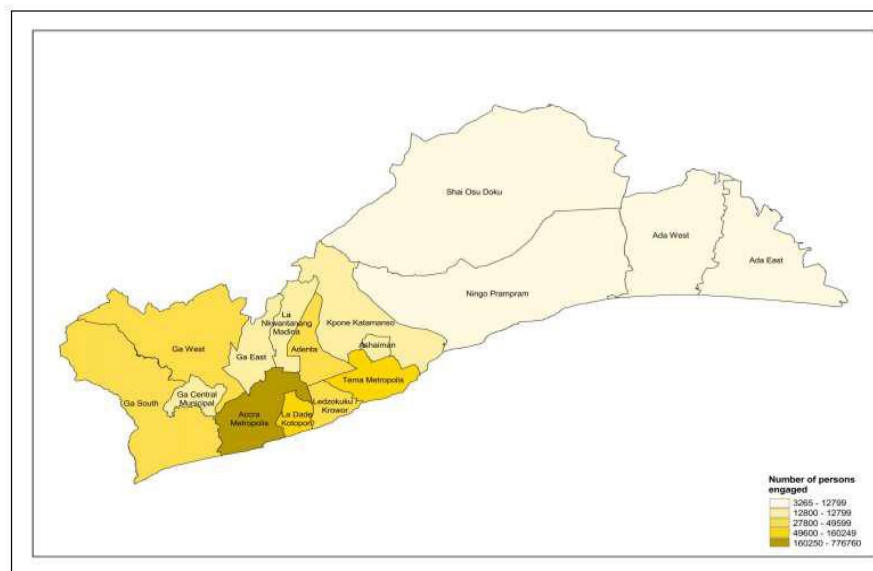
Study Area

A research study area is the defined geographical region that constitutes the thesis of the investigation. All aspects of the problem at hand and the community, including the participants and/or respondents that the researcher plans to interview and/or elicit responses from, fall under the study area. The study area for this present study comprises the Accra Metropolis and the Tema Metropolis of the Greater Accra region of Ghana. The Accra Metropolis (AM) and Tema Metropolis (TM) are widely regarded as having the highest concentration of SMEs. The two metropolises also make up the capital of Ghana and have been the country's economic and industrial centres for decades.

Greater Accra, the capital region of Ghana, represents a dynamic and rapidly evolving hub of economic activity, making it an ideal setting for investigating the relationship between digital entrepreneurship and SME owner-managers' well-being. As the most urbanized and economically significant region in Ghana, Greater Accra is home to a high concentration of SMEs that are increasingly integrating digital technologies into their business operations (GSS, 2021). The government's activities and the expanding digital connectivity infrastructure in this region have fostered a thriving entrepreneurial ecosystem that makes it an ideal place to research the influence of digital entrepreneurship on the well-being of SME owner-managers' (Boateng et al., 2017).

Moreover, the presence of numerous educational institutions and research centers in Greater Accra facilitates access to intellectual capital, which is crucial for the development and success of digital SMEs (Anning-Dorson, 2018). Given these factors, Greater Accra serves as a representative microcosm for understanding the broader trends and challenges faced by SMEs in Ghana, thus providing valuable insights that can inform both local and national policy initiatives aimed at fostering sustainable digital entrepreneurship.

According to the Ghana Statistical Service (2021), the Accra Metropolis had a population of 284,124, making it one of the 26 districts in the Greater Accra Region. It was one of Ghana's 254 metropolitan, municipal, and district districts. As of March 2018, it includes the sub-metropolitan district councils of to become Kpone-Katamanso Municipal District on March 15, 2018).



Map of Accra: Source (Ghana Statistical Service, 2016)

Figure 3: Spatial distribution of persons engaged by establishments located in the Greater Accra Region

Study Population

According to Asiamah, Mensah and Oteng-Abayie (2017), a population is considered to be the entire group about which some knowledge must be gathered or investigated. Leedy and Ormrod (2010) added that the population of a study can be seen as the target group about which the researcher is interested in gaining information and drawing conclusions. The target population of this study comprised owner-managers of businesses within the SME sector in the Accra Metropolis and the Tema Metropolis of the Greater Accra region, Ghana. Oppong et al. (2014) found that owners and, in some cases, relatives take on managerial responsibilities in SMEs. These business entrepreneurs typically provide the necessary funding for their companies. Since it is up to this community to revolutionize their business practices through technology, all SMEs owners and/or owner-managers in AM and TM provide a prime entry point for collecting the data necessary to achieve the study's aims.

According to the Ghana Enterprise Agency, there are about 5,725 and 4,865 SME managers in the Accra and Tema metropolises, respectively. The population of this study is therefore made up of 10,590 SME managers in these two metropolises.

Sample and Sampling Procedure

A sample is a carefully chosen subset of the total number of instances or units that accurately represents the population as a whole. The goal of sample selection is to elucidate unexplored theoretical areas, highlight interesting characteristics of individuals or groups, or provide a more comprehensive knowledge of intricate relationships (Neuman, 2014).

The sampling frame which has all the names and details of the SMEs was obtained from the Ghana Enterprises Agency. To give each SME an equal probability of being selected, the lists of the SMEs for the Tema and Accra Metropolis were combined and by using the Excel RAND function, the researcher selected a total of 385 owner-managers of SMEs who participated in the study. The researcher located the listed SMEs as selected by the Excel RAND function for data collection. This is justified as the study respondents are made of homogenous characteristics such as SME owner- managers in Ghana.

The study utilised Yamane's (1967) sample size determination formula to select respondents. According to the formula,

$$n = N / [1 + N (e)^2]$$

$$n = 10,590 / [1 + 10,590 (0.05)^2]$$

$$n = 385$$

Where n = sample size; N = sample frame; and e = margin of error. A margin of error of 5% was used, as proposed by Yamane (1967).

This implies that to successfully achieve a 5% margin of error, the researcher had to survey approximately 385 SMEs in Accra and Tema from the total population of 10,590.

Sampling, on the other hand, is defined by Malhotra and Birks (2007) as the process of taking a small subset of a larger group in order to draw conclusions about its characteristics. In addition, sampling refers to the selection of a subset of a studied population (Babbie, 2011). Sampling is the mechanism of picking certain components of a population for research in order to make conclusions based on the results of the individual samples

(Kothari, 2004; Zikmund et al., 2013). According to Adom (2015), sampling must be executed in such a way that the elements chosen from the target population properly represent the whole population from which the elements were chosen. Researchers are open to two types of sampling, namely probability sampling and non-probability. (Kothari 2004). The probability sampling was employed in the current study.

Under the probability, all elements in the population have an equal chance of being sampled and the probability that any of them will be chosen can be determined (Leedy & Ormrod, 2010). According to Leedy and Ormrod (2010), probability sampling is used when a researcher wants to generalize the results of a study to the universe under investigation. Probability sampling includes random, stratified, systematic and cluster sampling methods. The methods for selecting a random sample from the research population under the probability sampling design include the lottery technique, random numbers method, and computer method (Leedy & Ormrod, 2010).

Measurement of Variables

The variables used in this research were based on existing empirical literature in the fields of digital entrepreneurship, intellectual capital, and employee well-being. This made it possible to develop an instrument using verified measurement units.

Digital Entrepreneurship

The three dimensions of digital entrepreneurship used in this study were adapted from Anwar and Daniel (2016), Awawdeh et al. (2022), Bach, Jaklič, and Vugec (2018) and Paul et al. (2023) and the measures of the individual digital entrepreneurship dimensions were adopted from scales with

confirmed reliability. Digital entrepreneurship dimensions were measured in terms of the extent to which SME owners blend the incorporation of digital technologies into their operations.

The indicators for digital entrepreneurship in this study include digital leadership, digital knowledge, and digital creativity. The study adapted Zeike et al. (2019)'s scale for measuring the digital leadership, digital knowledge, and digital creativity variable. Also, similar studies on digital entrepreneurship used these indicators (Anwar & Daniel, 2016; Awawdeh et al., 2022; Bach, Jakli, & Vugec, 2018; Paul et al., 2023) in assessing the construct. All the items were measured on a 7-point Likert scale (1 = least form of agreement and 7 = highest form of agreement) to enable respondents to indicate the degree or extent to which they had adopted the practice described by the item.

Well-being

In the context of this present study, well-being was operationalized in terms of the areas of enterprise managers' lives that are most likely to be influenced by a digitalization initiative or the digitalization of their enterprises. A survey questionnaire adapted from Netemeyer et al. (2018) and Kempson et al. (2017) was developed and used as the instrument to collect data on financial and non-financial aspects of enterprise managers' well-being. The assessment of the well-being construct complemented existing well-being literature (Bruggen et al., 2017; Fisher, 2014; Michael Collins & Urban, 2020; PwC, 2019; Tuzovic & Kabadayi, 2020).

Intellectual Capital

Organisational capital, human capital, and relational capital all contribute to intellectual capital through indicators such as education,

competencies, employee interactions, quality of information systems, enterprise culture, dedication, support, etc. The study used twenty items derived from the measures developed by Chen et al. (2009) and Liu and Jiang (2020) to assess the organisational, human, and relational components of intellectual capital. Extant literature in entrepreneurship have used this measure to assess intellectual capital in the context SMEs. (Chen et al., 2009; Liu & Jiang, 2020).

Data Collection Instrument

The study adapted a questionnaire for data collection (Appendix A). It has been noted by Cohen, Manion, and Morrison (2007) that the questionnaire is more reliable than an interview since respondents are more likely to be open and honest when they know their responses will not be disclosed. Despite its usefulness, the questionnaire has some obvious flaws, such as the possibility of common method bias and of respondents misinterpreting the questions due to poor wording. However, the researcher made sure these drawbacks were minimised as much as possible by doing a preliminary test on the instrument and fixing any problems it revealed. In the same vein, all VIFs were less than 3.3, suggesting no widespread bias from any single research technique. Since the researcher could not interview all SME managers in Accra and Tema metropolises, a questionnaire seemed most appropriate and helped elicit responses from all SME owner-managers, addressing their digital entrepreneurship initiatives, wellbeing, and intellectual capital.

The study's data collection instrument was adapted from some empirically validated studies. The scales, as designed by Zeike, Bradbury, Lindert and Pfaff (2019), were adapted for digital leadership, digital

knowledge, and digital creativity, respectively, for the dimensions of digital entrepreneurship. The items relating to financial well-being were developed based on the reflections of the Consumer Financial Protection Bureau (2015) and the work of Adam, Frimpong and Boadu (2017). In addition, the scales as constructed by Netemeyer et al. (2018) and Kempson et al. (2017) were also adopted for financial well-being. For the constructs of non-financial well-being, the scales developed by Margolis et al. (2019), known as the Riverside Life Satisfaction Scale (RLSS), and the Satisfaction with Life Scale (SWLS), developed by Diener et al. (1985), were adapted. Finally, scales from the studies of Chen et al. (2009) and Liu and Jiang (2020) were adapted for measuring the intellectual capital construct.

In addition to using paper questionnaires, the researcher also used an online survey tool to compile their data. In order to get honest feedback from the survey's respondents, a closed-ended method of data gathering was adopted. Responses in Sections B, C, D, and E of the study were compiled using a seven-point Likert scale. This scale allowed the researcher to measure the objective opinions of study respondents on a continuum scale from 1 to 7, where 1 indicates "least agreement" and 7 indicates "strongest agreement." In all, the study's questionnaire was made up of five distinctly guided sections.

The first section (Section A) of the study's questionnaire focused on the demographic characteristics of the study's respondents. This looked at the role or position held in the firm, the respondent's gender, age, and educational qualification. Section "B" contained items assessing the SME's information, such as the type of industry one's firm operates in, the number of years the firm has been incorporated, employee size and the form of business that one

operates in. Section “C” of the study’s questionnaire also focuses on digital entrepreneurship, which is further segregated into three sub-sections: digital leadership, digital knowledge and digital creativity. All 23 items were used to measure digital entrepreneurship. Section “D” of the study’s questionnaire also concentrated on SME managers’ well-being. This construct had two sub-dimensions: financial and non-financial well-being, which were measured with 13 items, while Section “E,” which focuses on SME intellectual capital, also had three dimensions: human, organisational and relational capital, which were also measured with 20 items. The respondents were asked to answer 64 questions in all. The questionnaire’s specifics are included in appendix A.

The study’s choice of close-ended questions allowed the respondents to consider each potential answer independently of the other choices. They offered the respondents alternatives to select from among a range of responses. Structured questionnaires allow quick and robust interpretation, and the researcher leverages the data flow for the report (Denscombe, 2014). It was projected that the questionnaire sample would take forty-five (45) minutes to complete. Even though certain demographic information was requested at the start of the questionnaire, respondents were assured of their anonymity and confidentiality. Table 1 presents the type of instrument for the conceptual variables.

Table 1: Instrument for Study Variables

Variable	Dimension	Number of Items	Author(s)
Digital Entrepreneurship	Digital leadership	9	Zeike, Bradbury, Lindert and Pfaff (2019)
	Digital knowledge	7	
	Digital creativity	6	
Intellectual capital	Human capital	5	Liu and Jiang, 2020; Chen, Shih, and Yang (2009)
	Relational capital	8	
	Organisational capital	6	
Well-being	Financial well-being	5	Adam, Frimpong and Boadu (2017); Netemeyer et al. (2018)
	Non-financial Well-being	8	

Source: Field survey (2023)

Reliability and Validity

The term reliability refers to the extent to which data-gathering procedures or evaluation methodologies result in reliable findings (Saunders et al., 2007). It is often done by maintaining a steady level of performance regardless of changes in periods and location (Bowling, 2009). It is considered reliable when an instrument can precisely measure a variable and produce similar results over an indefinite period of time. In any instance, arbitrary errors affect unwavering quality. A pre-test may aid in identifying the most likely source of errors and responding to them before the main study.

The reliability measure ρ_A is a squared correlation between the PLS construct score and the (unknown) true construct score. It must be at least 0.6. (Hulin, Netemeyer, & Cudeck, 2001). The scale's reliability was determined using ρ_A , while Cronbach's alpha (0.6) and composite reliability (0.6) were also calculated. Thus, ρ_A is regarded as the most critical PLS

reliability measure (Dijkstra & Henseler 2015), since it is currently the only consistently reliable measure of PLS construct scores (Henseler, 2017).

A constant literature assessment of the major constructs was used to verify the validity of the content. The component was measured using approved scales. Additionally, the supervisors scrutinised the items, measuring the constructs thoroughly before their final acceptance. The average variance extracted was employed to determine convergent validity. Convergent validity quantifies the degree to which various indicators of the same concept are correlated (Ab Hamid, Sami, & Sidek, 2017).

Additionally, Benitez, Henseler, and Castillo (2020) emphasise that convergent validity quantifies how well indicators of the same latent variable assess the same constructs. It was determined using the AVE (Ringle, Wende, & Becker, 2015). Before convergent validity can be accurately assessed, AVE values must be 0.5 or more.

Validity refers to the truthfulness of a study's results and whether the findings are truly what they seem to be (Saunders et al., 2007). When an instrument fulfils its intended function, it is deemed valid. The superiors reviewed this questionnaire before the researcher was allowed to distribute it to respondents. Their advice was followed to ensure clarity and that no irrelevant questions were stated for the research. In light of the study's context, construct validity was evaluated by analysing the composite reliability and average variance extracted from each participant's value system.

To ensure construct validity, all-composite lists should be 0.7 or above (Bagozzi & Yi, 1988). Chin (1998) suggested that the average variance extracted should be 0.5 or more to prove the concept's validity. The square

root of the average variance recovered from each latent variable can be used to show that the test is discriminative (Fornell & Larcker, 1981). This is also feasible if the average variance derived from the inactivated components is greater than the covariance measures. As such, the lack of evidence of validity implies that the study's findings cannot be confirmed and do not accurately reflect the real requirements (Kennedy & Tuckman, 2013).

Pre-Testing

Pallant (2016) argues that pre-tests are a necessary step in the research process before carrying out the main study. Instructions, questions, and scale items can all benefit from the increased clarity obtained from this research process. They also make the questions easier to understand and help get more genuine answers from respondents. Following the supervisors' clearance of the questionnaire, the study performed pilot testing with twenty-five (25) SME managers from the Ashanti region. Despite Nieswiadomy's (2002) suggestion that 10 participants make for an adequate pretest, 25 respondents were used in this study's pre-test. In addition, Saunders et al. (2016) confirmed that 10 participants are considered sufficient when conducting pilot surveys.

For this pre-test, the researcher collected data from SME managers in the Ashanti region. According to the Ghana Statistical Service's Summary Report (2021), the Ashanti region has the second-highest concentration of SMEs in Ghana after the Greater Accra region. Given their shared characteristics with the assumed population, managers of SMEs in this area were chosen as proxy. During the pilot study, only two issues were raised: the length of the questionnaire items and the discrepancies in the Likert scales utilised for the variables. To get more people involved, the researcher

condensed the statements and adopted a standard Likert scale based on the concerns raised by the respondents. All the questionnaire items point to good reliability based on the criteria given by Pallant (2016) and Boohene et.al., (2012), as shown in Table 2.

Table 2: Questionnaire items and their reliability coefficients

Variables	Details	Sample	Cronbach's Alpha
Digital Leadership	9	25	0.883
Digital Knowledge	7	25	0.921
Digital Creativity	7	25	0.813
Financial Well-being	5	25	0.908
Non-financial Well-being	8	25	0.827
Intellectual Capital	20	25	0.924

Source: Field survey (2022)

Data Collection Procedures

The researcher requested an introductory letter from the Head of Department of Management of the School of Business, University of Cape Coast, to solicit the assistance of the SME managers and owner-managers of the selected metropolis for the effectiveness of the study. The data collection was carried out for a period of one and half month between May and June 2023 following the approval of the study instrument. Questionnaires were administered in the same month. Five research assistants were recruited from the University of Cape Coast following an extensive screening, to assist the researcher in administering the questionnaire to the owners and/or managers of the SMEs.

The training was conducted for the five field research assistants before commissioning the data collection. The orientation comprised informing the assistants of the objectives of the research, the participants, ethical standards adherence, deadlines for distribution and retrieval of questionnaires, and how to manage the data collecting operation. The field assistants were taken through a template for record keeping outlining information such as the date of first contact, an appointment for questionnaire collection

Ethical Considerations

In the process of conducting a study, it is important to keep in mind numerous things. Bless and Higson Smith (2000) state that these are crucial for ensuring that real protocols are followed throughout the study, from the inception of the issue through its end. Bless and Higson Smith state that anonymity and the protection of personal privacy are among the most important principles in data gathering, along with the transparency of the process and respect for the dignity of the individual. This present study included all of these requirements and restrictions. Thus, this research and its methodology add to these two areas of legal requirements. A standard procedure for data entry was also followed before the data was processed.

The study followed the ethical guidelines established by the University of Cape Coast, and the author secured institutional approval and informed consent from all study participants. The survey was created in a way that protected the confidentiality of respondents. All of this was done for the respondents' safety and protection from any potential unethical issues. All respondents were informed of the purpose of the study as well as assured of their confidentiality and anonymity. The participants were then informed that

their participation in the study was voluntary and that they might terminate their participation at any moment. However, participants were strongly encouraged to provide true responses to all items.

Data Processing and Analysis

The statistical software employed for this study was IBM SPSS Statistics (version 26) and SmartPLS (version 4). Inferential statistics through partial least squares structural equation modelling (PLS-SEM) was used to address the hypotheses formulated for the study. The choice of the analytical software was informed by its effectiveness in examining the relationships between variables that were raised in this study. Specifically, whereas frequencies and percentages were used to report on the demographic characteristics, the objectives were analysed using inferential statistics through PLS-SEM. SPSS software enabled the researcher to perform data coding, entry, cleaning, and checking for outliers in the data to ensure that no missing values existed.

The coding of the questionnaire items was done by assigning some unique codes to the various items of the constructs in the SPSS file. The 23-item digital entrepreneurship (DE) construct consisting of digital leadership, digital knowledge, and digital creativity as dimensions were denoted as DL1, DL2, DL3... DL9, and DK1, DK2, DK3,... DK7 and DC1, DC2, DC3,... DC7, respectively. The 13-items of well-being (WB) construct consisting of the financial and non-financial were uniquely named as FW1, FW2, FW3, ..., FW5, and NFW1, NFW2, NFW3, ... NFW8 respectively. The 20-items of intellectual capital (IC) construct comprising of human capital, organisational capital and relational capital had indications such as HC1, HC2, HC3..., HC5;

OC1, OC2, OC3, ... OC7; and RC1, RC2, RC3, ...RC8 respectively. After these checks were done, the SPSS file was saved as a “comma-delimited” file to enable its acceptability by the SMART PLS software, which helped produce the necessary results required to contain the various objectives of the study.

Partial Least Square - Structural Equation Modelling (PLS-SEM)

PLS-SEM is a second-generation statistical technique that enables researchers to incorporate unobservable variables measured indirectly by indicator variables. It is made up of a family of statistical techniques that has become very popular in the business and social sciences due to its ability to model latent variables, take into account various forms of measurement error, and test entire theories that are useful for a plethora of research questions (Henseler, Hubona, & Ray, 2016). PLS-SEM uses available data to estimate the nexuses of the path in the model to minimise the residual variance of the endogenous constructs. PLS path models are formally defined by two sets of linear equations: the measurement model (also called the outer model) and the structural model (also called the inner model). According to Henseler et al. (2016) and Hair, Risher, Sarstedt and Ringle (2019), whereas the measurement model specifies the relations between a construct and its observed indicators (also called manifest variables), the structural model specifies the relationships between the study's constructs.

Hair, Hult, Ringle, Sarstedt and Thiele (2017) postulated that the first step in evaluating PLS-SEM results involves examining the measurement models and if the measurement models meet all the required criteria, researchers can then be able to assess the structural model. As with most statistical methods, PLS-SEM has rules of thumb that serve as guidelines to

evaluate model results (Roldán & Sánchez-Franco, 2012; Hair et al., 2017). Rules of thumb, by their very nature, are broad guidelines that suggest how to interpret the results, and they typically vary depending on the context.

Measurement Model Assessment

According to Hair et al. (2017), the first step in reflective measurement model assessment involves examining the indicator loadings. Loadings above 0.708 are recommended, as they indicate that the construct explains more than 50 percent of the indicator's variance, thus providing acceptable item reliability. Therefore, indicators with loadings below the 0.708 threshold were deleted from the model unless retaining those indicators did not affect the overall reliability of the constructs. However, Hair et al. (2017) argue that if a lot of items on the constructs fail to load at the 0.708 level, a range of 0.5 to 0.7 or higher could be acceptable as long as the overall reliability isn't significantly affected.

The second step is assessing internal consistency and reliability, most often using Jöreskog's (1971) composite reliability. Higher values generally indicate higher levels of reliability. For example, reliability values between 0.60 and 0.70 are considered acceptable in explanatory research; values between 0.70 and 0.90 range from satisfactory to good (Hair et al., 2017). Cronbach's alpha is another measure of internal consistency reliability that assumes similar thresholds but produces lower values than composite reliability (Diamantopoulos, Sarstedt, Fuchs, Wilczynski & Kaise, 2012; Sarstedt, Ringle & Hair, 2017). Specifically, Cronbach's alpha is a less precise measure of reliability as the items are unweighted. In contrast, with composite reliability, the items are weighted based on the construct indicators' individual

loadings, and, hence, this reliability is higher than Cronbach's alpha. While Cronbach's alpha may be too conservative, the composite reliability may be too liberal, and the construct's true reliability is typically viewed as within these two extreme values (Hair et al., 2017). As an alternative, Dijkstra and Henseler (2015) proposed ρ_A as an approximately exact measure of construct reliability, which usually lies between Cronbach's alpha and composite reliability. Hence, ρ_A may represent a good compromise if one assumes that the factor model is correct. In this study, the researcher relied on the values of all the measures of internal consistency because they all met satisfactory criteria.

The third step of the reflective measurement model assessment addresses the convergent validity of each construct measure. Convergent validity is the extent to which the construct converges to explain the variance of its items (Hair et al., 2019). The metric used for evaluating a construct's convergent validity is the average variance extracted (AVE) for all items on each construct. To calculate the AVE, one has to square the loading of each indicator on a construct and compute the mean value. An acceptable AVE is 0.50 or higher, indicating that the construct explains at least 50 percent of the variance of its items (Henseler et al., 2016).

The fourth step is to assess discriminant validity, which is the extent to which a construct is empirically different or distinct from other constructs in the structural model. In 1981, Fornell and Larcker came up with the traditional metric. They said that the AVE of each construct should be compared to the squared inter-construct correlation, which is a way to measure how much variance is shared between that construct and all the other reflectively

measured constructs in the structural model. The shared variance for all model constructs should not be larger than their AVEs. However, recent research indicates that this metric is not suitable for discriminant validity assessment; thus, Henseler et al. (2015) showed that the Fornell-Larcker criterion does not perform well, particularly when the indicator loadings on a construct differ only slightly (e.g., all the indicator loadings are between 0.65 and 0.85). As a replacement, Henseler et al. (2015) proposed the heterotrait-monotrait (HTMT) ratio of the correlations. The HTMT is defined as the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct. Discriminant validity problems are present when HTMT values are high, and as a rule of thumb, a HTMT ratio value less than 0.85 connotes the nonexistence of discriminant validity problems (Henseler et al., 2015).

Structural Model Assessment

When the measurement model assessment is satisfactory, the next step in evaluating PLS-SEM results is assessing the structural model. According to Hair et al. (2019), the basic standard valuation criteria to be considered include the coefficient of determination (R^2), the Q^2 ("blindfolding-based cross-validated redundancy measure"), the effect size (f^2), and the statistical significance and relevance of the path coefficients. In the view of Hair et al. (2019), an R^2 measures the variance explained in each of the endogenous constructs and is therefore a measure of the model's explanatory power. As an acceptable rule, R^2 values of 0.25, 0.5 and 0.75 are considered weak, moderate and substantial, respectively. In addition, "a predictive relevance (Q^2) of 0.02, 0.15 and 0.35 is considered small, medium and large,

respectively. Furthermore, effect sizes (f^2) of 0.02, 0.15 and 0.35 are seen as small, medium and large, respectively (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). Finally, a significant level of 5% or less or a t-statistic of 1.96 or higher is appropriate for a structural model.

Mediation Procedure in PLS-SEM

Mediation considers the presence of an intermediate variable or mechanism that transmits the effect of an antecedent variable to an outcome (Aguinis, Edwards, & Bradley, 2016; Carrión, Nitzl, & Roldán, 2017). Thus, the mediation model seeks to identify and explain the process that triggers an observed nexus between an independent and dependent variable. Mediator variables absorb part of the relationship between an exogenous and an endogenous construct in the partial least squares path model (Nitzl et al., 2016).

The mediation effect tested in this study is based on the procedure developed by Nitzl et al. (2016) to test mediation effects on PLS-SEM. The mediation analyses begin with testing the indirect effect (through the mediator) to assess its significance. Nitzl et al. (2016) propose that it is not necessary to conduct separate tests for direct and indirect paths when applying PLS-SEM. A significant indirect effect is the only prerequisite for establishing a mediation effect. The significance of the direct effect determines the type of effect or mediation. Hair et al. (2017) and Ramayah, Cheah, Chuah, Ting and Memon (2018) emphasised two different types of mediation: full and partial mediation. Partial mediation can be subdivided into complementary and competitive partial mediation.

Carrión et al. (2017) posit that full mediation occurs when a direct effect is not significant, whereas the indirect effect is significant, indicating that the effect of the exogenous variable on the endogenous variable is completely transmitted with the help of the mediating variable. In a complementary partial mediation, the direct effect and indirect effect point in the same (positive or negative) direction (Baron & Kenny, 1986). In competitive partial mediation, the direct effect *and* indirect effect point in a different direction (Zhao, Lynch, & Chen, 2010). There is no mediation when the indirect effect is not significant.

Additionally, Hair et al. (2017) argue that researchers may rely on the value of the variance accounted for (VAF), i.e., calculated as the total indirect effect/total effect * 100, to interpret the types of mediation. The rule of thumb is that if the VAF is less than 20 percent, one should conclude that nearly zero mediation or no mediation occurred. A situation in which the VAF is larger than 20 percent and less than 80 percent could be characterised as a typical partial mediation, and a VAF above 80 percent indicates a full mediation (Hair et al., 2017). The researcher for the analysis of mediation in this study followed the aforementioned procedure for mediation analysis. Table 2 provides a summary of the study's analytical approach.

Table 3: Summary of Model Evaluation Criteria

Measurement Model	Indices
Reliability	Cronbach's alpha ≥ 0.7 rho_A ≥ 0.7 (Henseler, 2017)
Convergent validity	Average variance extracted ≥ 0.5 (Hair et al., 2019)
Discriminant validity	Heterotrait-Monotrait Ratio ≤ 1 (Henseler et al., 2015)
Composite reliability	Composite reliability ≥ 0.7 (Hair et al., 2017)
Common method bias	Variance inflation factor < 5 (Kock, 2015)
Structural Model	Indices
Indicator reliability	Indicator loading > 0.7 ; $p \leq 0.05$ (Hair et al., 2017)
Coefficients and effect size	Unstandardized beta f^2 : Effect size values above 0.35, 0.15, and 0.02 are interpreted as strong, moderate, and weak, respectively (Hair et al., 2014)
Coefficient of determination	R^2 : Results above 0.75 (Substantial), 0.5 (Moderate) and 0.25 (Weak) (Hair et al., 2019)
Source: Field Survey (2022)	

Chapter Summary

This chapter discussed the methodology employed for the study, and this includes the research philosophy, research approach, research design, the study area, population, sample and sampling procedures adopted for the study, the instruments used, and procedures followed in the collection, processing, and analysis of data. The discussion provided a basis for the choice of the study's population and the study sample. In line with the purpose of the study, the chapter described the instrument used for this study and the analysis conducted on each objective. It enshrines that the confidentiality and anonymity of the respondents are protected, and the results will be used purely for academic purposes.

CHAPTER FOUR

DIGITAL ENTREPRENEURSHIP AND WELLBEING

Introduction

This chapter introduces the results and discusses the various objectives set in the study. On one hand, the chapter presented the descriptive statistics of the respondents, firms, and variables of the study, as well as the normality assessment. The other hand of the chapter reported the results and discussions on the first objective of the study, herein called Model 1, which sought to analyse the influence of digital entrepreneurship (DE) on the well-being (WB) of owner-managers of SMEs in Ghana. For Model 1, three hypotheses emanated from it and were connected to how the dimensions of DE, i.e., digital leadership (DL), digital creativity (DC) and digital knowledge (DK), influenced WB in the firms. The analysis was done using the PLS-SEM procedures for measurement and structural models and interpreted accordingly.

Also, frequencies and percentages were used for the characteristics of the respondents and firms, while means and standard deviations were employed to provide descriptions of the various variables in the study. Furthermore, normality tests were conducted using the Skewness and Kurtosis, Kolmogorov-Smirnov and Shapiro-Wilk tests and reported in the chapter. For the demographic characteristics, some of the information captured includes the respondents' role in the firm, gender, age, and educational qualification. Regarding the firms' characteristics, the information presented was the firm's industry, number of years in operation, employee size and form of business ownership.

Characteristics of the Respondents

This section presents the background features of the respondents (i.e., managers of the firms) of the study. The major data collected concerning the respondents were respondents' role in the firm, gender, age, and educational qualification. According to the statistics in Table 3, the number of respondents who were owners of the firms contacted was the majority, comprising a percentage of 43 percent. Next to the owners were the managers supervising the firms, who made up 30.2 percent, while 26.8 percent of the respondents doubled as owners and managers (owner-manager) of the firms. Given these statistics, the respondents were knowledgeable enough to handle the questionnaire concerning the firms. With regards to the gender distribution of the respondents, the study discovered that over half of the respondents, i.e., 57 percent, were males as compared with females, who took 43 percent in running the affairs of the respective firms.

Also, the age of the respondents was picked. It is revealing from Table 3 that the majority of them were within the age range of 30-39 (44.6%). This was followed by those who were within the age category of 20-29 years (27.1%). Apart from that, the table shows that the respondents who manned the affairs of the firms and who were 40-49 years old formed 24.1 percent. The least age range had been 50-59 years, representing 4.1 percent of the total respondents.

Table 4: Background of the Respondents

Variable	Option	Frequency	%
Role in Firm	Owner	167	43.0
	Manager	117	30.2
	Owner-manager	104	26.8
	Total	388	100
Gender	Male	221	57.0
	Female	167	43.0
	Total	388	100
Age	20 -29	105	27.1
	30- 39	173	44.6
	40-49	94	24.2
	50-59	16	4.1
	Total	388	100
Educational	No formal education	8	2.1
	Basic education certificate	4	1.0
	Senior/Technical School certificate	73	18.8
	HND/Diploma	92	23.7
	Degree	135	34.8
	Postgraduate	76	19.6
	Total	388	100

Source: Field Survey (2023)

Finally, the educational level of the respondents was taken, which revealed that the majority of them obtained first-degree qualifications (34.8%). Those who hold an HND or diploma accounted for about 23.7 percent of the respondents, followed by postgraduate holders, who comprised 19.6 percent. Furthermore, the details in the table reveal a percentage of 18.8 percent of respondents who were senior/technical school certificate holders, while 2.1 percent had no formal education, and lastly, 1 percent acquired basic education certificate qualifications. Despite the fact that some respondents do not have

formal education, data collection was still possible and done through translation by a voluntarily appointed person in the business to respond.

Characteristics of the SMEs

For the overview of the firms used in the study, the information gathered was in respect of the firm's industry, number of years in operation, employee size and form of business ownership. The results in Table 4 revealed that the majority of the businesses were registered as service firms (57.7%). This was followed by firms in the manufacturing sector, which accounted for over 21 percent of the firms sampled. The next three industry categories in order of numerical strengths are e-commerce (10.6%), agriculture (8%), and retail (2.6%). Concerning the years of firms' operation, the results in the table showed that the SMEs that existed between 1 and 5 years were more than others (57.7%). The experience of the firms within 6–10 years (19.3) followed that below 6 years. The least number of firms existed for about 20 years and above (4.4%).

Table 5: Characteristics of the Firms

Variable	Option	Frequency	%
Industry	Manufacturing	82	21.1
	Service	224	57.7
	Agriculture	31	8.0
	E-Commerce	41	10.6
	Retail	10	2.6
	Total	388	100
Years of operation	1-5 years	224	57.7
	6-10 years	75	19.3
	11-15 years	52	13.4
	16-20 years	20	5.2
	20 years and above	17	4.4
	Total	388	100
Number of employees	Less than 5	230	59.3
	5 - 29	133	34.3
	30-99	25	6.4
	Total	388	100
Business ownership	Sole Proprietorship	263	67.8
	Partnership	71	18.3
	Company Joint Venture	48	12.4
	Joint Venture	6	1.5
	Total	388	100

Source: Field Survey (2023)

Regarding the number of employees working in SME businesses, the results from Table 5 revealed that the majority of the firms have employed less than 5 employees (59.3%). While 34.4 percent of the firms have employed between 5 and 29 employees, the remaining (6.4%) of the sample firms have employee strengths ranging from 30 to 99. Finally, the study collected data on the forms of business ownership, including sole proprietorship, partnership, company, venture and joint venture. Thus, the results show that the majority of the registered firms were in the category of sole proprietorship (67.8%), while the least were joint ventures, yielding a percentage of 1.5. The next section of the chapter assessed the descriptiveness of the variables along with the normality of the data collected.

Descriptive and Normality Test

First and foremost, descriptive statistics through means and standard deviations were used to assess the respondent's perception levels of the constructs in the study. The study used variables including digital entrepreneurship, which had digital leadership, digital creativity and digital knowledge as subconstructs; intellectual capital, which had human capital; organisational capital; and relational capital as dimensions; and wellbeing. The levels of the variables are determined following the study of Dess, Lumpkin and McFarlin (2005), who provided the criteria for the midpoint of a 5-point Likert scale that values up to 3 show "low level" and values above 3 to 5 show "higher levels" of a construct.

Building on these criteria, the present study used a 7-point Likert scale and thus set the midpoint to 4 as "low level," whereas above 4 to 7 means "higher level." This means that the mean points of the constructs and subconstructs below 4 indicate that the firms have been slow in adopting and implementing these measures. In addition to the levels of the variables, the normality checks were tested in the study. These checks on the data were done to ascertain how evenly distributed the data points are relative to each other. This ensures that the data collected is not far from normal or what is expected.

Although normality checks are not compulsory when using PLS-SEM for data analysis (Hair et al., 2019), Pallant (2016) notes that the process is necessary for users to have a good view of how the respondents perceive the phenomenon studied. Though several approaches exist on how to check for normality, the current study adopted the criteria of Pallant (2016). The author suggests that data is normal when the Skewness and Kurtosis scores of the

various items of the constructs deployed in a study fall between 0 and ± 1.5 . Also, the Kolmogorov-Smirnov and Shapiro-Wilk tests were done following a similar procedure for testing hypotheses. The basic principle is that the significance of the statistics tells us that the null hypothesis, which suggests the data is far from normal, should be rejected to show the data is normal or evenly distributed (Pallant, 2016). The tables that ensued were used to assess the means, standard deviations, and normality statistics of the respective variables.

Digital Entrepreneurship

The digital entrepreneurship construct was sub-scaled into three sub-constructs comprising digital leadership (DL), digital creativity (DC) and digital knowledge (DK). Therefore, these variables together show how much entrepreneurs create digital value by using different sociotechnical digital enablers that make it easier to get, process, share, and use digital information (Sahut et al., 2021). Table 5 was used to present summaries of the values and tests of normality for the DE construct.

Table 6: Descriptive and Normality Assessment for Digital Entrepreneurship

Constructs	Mean	Std. Dev.	Skewness		Kurtosis	
	Stat	Stat	Stat	Std. Error	Stat	Std. Error
Digital Leadership	4.03	1.09	-.33	.124	-.07	.247
Digital Creativity	3.44	1.25	.24	.124	-.45	.247
Digital Knowledge	2.98	1.57	.32	.124	-1.09	.247
Digital Entrepreneurship	3.48	1.05	.38	.124	-.16	.247
Valid N (listwise)						

Source: Field Survey (2023)

Judging from the means, DE loaded low ($M = 3.48$; $SD = 1.05$), suggesting that overall, the concept is in its budding period in the Ghanaian SME sector. Precisely, in terms of DL ($M = 4.03$; $SD = 1.09$), the respondents indicated that their firms are practicing it. This was otherwise the case of DC and DK, whose results show that the firms have not fully rolled out the practice of the concepts in the SMEs' sector. Based on the Skewness and Kurtosis scores, the results from Table 6 suggest that there were no normality problems with the data. Thus, these values all fell below -1.5. As a follow-up to the test, the Kolmogorov-Smirnov and Shapiro-Wilk tests were depicted in Table 7

Table 7: Kolmogorov-Smirnov and Shapiro-Wilk test-DE

Constructs	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Stat	df	Sig.	Stat	df	Sig.
Digital Leadership	.064	388	.001	.986	388	.001
Digital Creativity	.109	388	.000	.966	388	.000
Digital Creativity	.142	388	.000	.925	388	.000
Digital Knowledge						
Digital Entrepreneurship	.082	388	.000	.976	388	.000
a. Lilliefors Significance Correction						

Source: Field Survey (2023)

A cursory look at the statistics for both tests suggests that normality violations were not detected for the variables. Hence, the variables met the criteria for further analysis. The next section reports on the descriptive nature of the intellectual capital construct.

Intellectual Capital

The intellectual capital (IC) construct also had dimensions covering the human capital, organisational capital and relational capital. The descriptive were ran on the constructs and the results presented in Table 8.

Table 8: Descriptive and Normality Assessment for Intellectual Capital

	Mean	Std. Dev	Skewness		Kurtosis	
Constructs	Stat	Stat	Stat	Std. Error	Stat	Std. Error
Human Capital	3.20	1.70	.09	.124	-1.35	.247
Organisational Capital	3.51	1.23	.25	.124	-.83	.247
Relational Capital	4.10	.97	.18	.124	-.17	.247
Intellectual Capital	3.60	1.16	.16	.124	-1.03	.247
Valid N (listwise)						

Source: Field Survey (2023)

In Table 8, given that the mean and standard deviation of the IC ($M = 3.60$, $SD = 1.16$) construct were low as per the criteria, it can be said that the intellectual capital is less applied among the SMEs. The same was referred to in terms of human capital and organisational capital. However, the respondents stated that their firms exhibit relational capital. Furthermore, by relying on the established criteria for normality, the results in Table 8 show that the parameters for the normality of the data were upheld. Observing the scores of Skewness and Kurtosis has cleared doubts about the existence of abnormal data distribution in the dimensions and the construct at large.

Table 9: Kolmogorov-Smirnova and Shapiro-Wilk- Intellectual Capital

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Stat	df	Sig.	Stat	df	Sig.
Human Capital	.138	388	.000	.911	388	.000
Organisational Capital	.092	388	.000	.969	388	.000
Relational Capital	.093	388	.000	.973	388	.000
Intellectual Capital	.112	388	.000	.958	388	.000

a. Lilliefors Significance Correction

Source: Field Survey (2023)

The results displayed in Table 9 suggest that the superiority check for normality through Kolmogorov-Smirnova and Shapiro-Wilk was satisfactory and thus upheld that normality issues were non-existent. In the next table, the descriptive statistics of the next construct, well-being, were presented.

Well-being

Drawing from previous studies, the scales used for measuring well-being (WB) were adapted from multiple sources. Since the WB construct was made up of financial (FW) and non-financial (NWB), the study elicited responses from Netemeyer et al. (2018) and Kempson et al.'s (2017) instrument developed for FW. The NWB instrument from Margolis et al. (2019), modified from Diener et al. (1985), was relied upon to gather the data. This data was subjected to descriptive analysis and a test for normality to pave the way for inferential statistics or analysis. The descriptive statistics were reported in Table 10.

Table 10: Descriptive and Normality Assessment for Wellbeing

Constructs/items	Mean	Std. Dev	Skewness		Kurtosis	
	Stat	Stat	Stat	Std. Error	Stat	Std. Error
Financial Wellbeing	4.73	1.10	-.43	.124	-.22	.247
Non-financial Wellbeing	3.44	1.26	.19	.124	-.93	.247
Wellbeing	4.08	.80	-.10	.124	.85	.247
Valid N (listwise)						

Source: Field Survey (2023)

The overall mean of the Wellbeing construct illustrated that the respondents agreed to the effect that the Wellbeing of the business was high. In the same vein, both the financial and non-financial Wellbeing of the SMEs were high as seen from the means and standard deviations of the variables in Table 9. moreover, a cursory look at the values of the Skewness and Kurtosis in the table demonstrated that issues of abnormality in the data were not

detected. This means that the wellbeing construct qualified for use for further statistical analysis.

Table 11: Kolmogorov-Smirnova and Shapiro-Wilk-Wellbeing

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Stat	df	Sig.	Stat	df	Sig.
Financial Wellbeing	.099	388	.000	.966	388	.000
Non-financial Wellbeing	.092	388	.000	.969	388	.000
Wellbeing	.054	388	.008	.985	388	.000

a. Lilliefors Significance Correction

Source: Field Survey (2023)

The results were confirmed in Table 11 through the Kolmogorov-Smirnova and Shapiro-Wilk tests. Following the statistics in the table, the study concludes that the variables meet all standards for normality and can be used to analyse the various objectives and hypotheses stipulated in the study. The next sections addressed the specific hypotheses of the study through the PLS-SEM procedures.

Presenting PLS-SEM Results for Model 1

The partial least square structural equation modelling (PLS-SEM) was used to analyse the hypotheses in the research model 1. In using the PLS-SEM, two basic statistical approaches (measurement and structural model) must be followed to present the results. In addition, Hair et al. (2019) has documented some set of parameters that should be evaluated to meet accepted criteria in each of the approaches before the discussion of the results can proceed. Following Hair et al.'s (2019) procedures, the ensuing sections presented the parameters and results of the two models mentioned above.

Checking the Measurement Model

Before the presentation of the measurement model, the common method bias (CMB) of the responses were checked. This technique is usually conducted to establish or otherwise the non-existence of self-reported biases that may contaminate the validity of the results (Podsakoff et al., 2012). In PLS-SEM, the CMB is ascertained by relying on the collinearity statistics (i.e., Variance Inflation Factor, VIF) scores. It is recommended that the scores of VIF of the indicators should range from 0 to 5.0 (Becker et al., 2015).

The measurement model of the PLS-SEM generally assesses the performance and the suitability of the research instruments used in study in a given setting. The model extents check on the quality of the items and constructs or variables used to analyse a research problem or phenomenon. In doing so, previous researchers (Hair et al., 2019; Henseler et al., 2016) have shared same views on the parameters to evaluate under the model. The first is the indicator loadings criteria; next is internal consistency; followed by convergent validity and fourth, discriminant validity.

Indicator Loadings

The indicator loadings conversely called factor or item loadings measure the degree to which the specific questions asked respondents about a latent variable is reliable or indeed is a question deemed appropriate for the variable or construct. Statistically, a particular indicator or factor is seen as reliable when the Cronbach's Alpha value generated for that item is equal to or greater than 0.708. The normal practice is that when some of the factors have loadings below this threshold, they should be deleted from the model. However, scholars have also converged at the view that loadings below the

threshold up to 0.40 can be retained in so far as they contribute to the satisfactory reliability of the overall PLS-SEM model (Hair et al., 2019). Table 12 was deployed to capture results of the indicator loadings and CMB for the Model 1.

Table 12: Outer Loading and Collinearity Statistics for Model 1

Items/constructs	Loadings	T stat	P values	VIF
Digital Creativity				
DC1 <- Digital Creativity	0.859	66.386	0.000	2.688
DC2 <- Digital Creativity	0.864	73.812	0.000	2.814
DC3 <- Digital Creativity	0.764	28.364	0.000	1.935
DC4 <- Digital Creativity	0.777	38.041	0.000	1.927
DC5 <- Digital Creativity	0.754	31.533	0.000	1.876
DC6 <- Digital Creativity	0.789	36.411	0.000	2.129
DC7 <- Digital Creativity	0.674	18.546	0.000	1.738
Digital Knowledge				
DK1 <- Digital Knowledge	0.866	43.019	0.000	3.239
DK2 <- Digital Knowledge	0.873	44.574	0.000	3.350
DK3 <- Digital Knowledge	0.912	69.949	0.000	4.932
DK4 <- Digital Knowledge	0.916	75.543	0.000	4.640
DK5 <- Digital Knowledge	0.915	87.038	0.000	4.711
DK6 <- Digital Knowledge	0.921	75.166	0.000	5.846
DK7 <- Digital Knowledge	0.906	93.957	0.000	4.248
Digital Leadership				
DL1 <- Digital Leadership	0.904	83.439	0.000	2.666
DL2 <- Digital Leadership	0.941	158.316	0.000	3.827
DL3 <- Digital Leadership	0.888	53.882	0.000	2.640
Wellbeing				
FW1 <- Wellbeing	0.830	44.410	0.000	2.807
FW3 <- Wellbeing	0.854	56.178	0.000	2.718
FW4 <- Wellbeing	0.458	8.903	0.000	1.220
FW5 <- Wellbeing	0.514	11.485	0.000	1.346
NWB4 <- Wellbeing	0.863	59.565	0.000	3.783
NWB5 <- Wellbeing	0.883	78.953	0.000	3.785
NWB6 <- Wellbeing	0.780	32.456	0.000	2.053
NWB7 <- Wellbeing	0.849	47.977	0.000	2.688

Source: Field Survey (2023)

From Table 12, the values of VIF revealed the absence of CMBs in the respondents' responses. This is because all the items for the various latent

variables were lower than the 5.0 cut-off point. Also, based on the specified recommended thresholds, Table 11 revealed that the various items were suitable for the measurement model. Thus, the item loadings for DC ranged from 0.674 to 0.864; loadings for DK started from 0.866 to 0.921; DL was within the range of 0.888 to 0.941; whereas item loadings of WB acceptably had a minimum of 0.458 to a maximum of 0.883. These loadings including those below 0.70 such as DC7, FW4 and FW5 (see also, Figure 3) were retained because they contributed to improving the overall model reliability (Hair et al., 2019), i.e., their p values were significant with respective constructs. The rest of the items were deleted due to their poor loadings and contribution to constructs' AVE.

Internal Consistency and Convergent Validity

The internal consistency evaluates the extent to which the constructs used in the study are able to measure what they are supposed to measure. Thus, it is seen as the degree to which the constructs deployed can be relied upon to measure the phenomenon under investigation (Hair et al., 2019). To evaluate the internal consistency of the constructs, three specific indices have been suggested: Cronbach's Alpha (CA), rho_A and Composite Reliability (CR). Although, these three measures are good, the CR has been widely accepted as satisfactory due to the how vulnerable the other measures are in respect to the number of items in the construct. The benchmark for all the measure is values ≥ 0.708 (Hair et al., 2019).

The convergent validity (CV) is also one of the parameters for the measurement model. It examines how the constructs of the study share common relationships in the model. The assessment technique is by the use of

the Average Variance Extracted (AVE) from the PLS algorithms output. As a rule of thumb, the AVEs of the constructs should be greater than or equal to 50 percent ($AVE \geq 0.50$) in order for the constructs to explain over 50 percent of variance in the relationship among the constructs (Hair et al., 2019). In the Table 13, the study presented the assessment of these parameters.

Table 13: Constructs' Reliability and Validity for Model 1

Constructs	CA	rho_A	CR	AVE
Digital Creativity	0.896	0.918	0.918	0.617
Digital Knowledge	0.962	0.962	0.968	0.813
Digital Leadership	0.898	0.902	0.936	0.831
Wellbeing	0.894	0.923	0.918	0.593

Source: Field Survey (2023)

According to the Table 13, the internal consistency of the latent variables was found to be satisfactory based on the scores of the CA, rho_A and CR scores. The CR values for DC, DK, DL and WB were found as 0.918, 0.968, 0.936 and 0.918 respectively. Again, Table 13 revealed that the extent to which the constructs achieved mutual relationships through their AVEs was appropriate in the study. A cursory look at the values suggests that all the constructs mutually explain more than 50% of variance against each other.

Discriminant Validity (DV)

The DV explains the distinctiveness of the constructs in a single investigative phenomenon. It defines the extent to which the constructs differ from each other. To achieve this uniqueness of the constructs, two major methods have been prescribed: Fornell and Larcker's (1981) criterion and the Heterotrait-monotrait ratio (HTMT) proposed by Henseler et al. (2016).

Although the two are ‘okay’ for use, the HTMT ratio serves better explanatory power than the former.

The Fornell and Larcker’s (1981) criterion picks the square roots of constructs’ AVE and assert that the score should be higher when correlated with its own construct than the correlation with other constructs. Regarding the HTMT ratios, the general rule is that the HTMT values in circumstances of related constructs should be ≤ 0.90 and 0.85 when the constructs are theoretically unrelated. The two were reported in Tables 14 and 15 respectively.

Table 14: Fornell-Larcker criterion for Model 1

Constructs	DC	DK	DL	WB
DC	0.785			
DK	0.730	0.902		
DL	0.713	0.714	0.911	
WB	0.644	0.675	0.709	0.770

Source: Field Survey (2023)

In the Table 14, the bolded values depict the square roots of the constructs’ AVEs. As stated earlier, these values are higher than the correlations with other constructs in the model. The HTMT ratios were reported in the next table, Table 15.

Table 15: Heterotrait-monotrait ratio (HTMT) for Model 1

Constructs	DC	DK	DL	WB
DC				
DK	0.772			
DL	0.777	0.765		
WB	0.683	0.714	0.781	

Source: Field Survey (2023)

Given the thresholds established for the HTMT ratios, the evidence in Table 15 confirms that the various constructs were unique. Since, the DC, DK and DL are theoretically related, the 0.90 criteria were upheld. This means that the individual constructs are capable of representing unique phenomena. Once the aforementioned parameters for the measurement model were met, the researcher proceeded to evaluate the structural model.

Structural Model for Model 1

The structural model results usually are used to analyse the specific objectives or hypotheses of the study. In light of this, the assessment of the model is also premised on certain established criteria including, the correlation coefficient (R), coefficient of determination (R^2), the effect size (f^2) and predictive relevance (Q^2). Also, the t-statistics and the P-values emphasise the significance of the paths established under the structural model.

The path coefficients generally are correlation coefficients, which define the direction and the strength of the relationship between two variables. Based on Cohen's (1992) rule of thumb, correlation values between ± 0.29 are described as weak, ± 0.49 are described as moderate, whereas ± 0.50 and above signify strong or large correlation values. The R^2 explains the number of changes that can be made by the dependent or endogenous variables due to variations in the scores of the independent or exogenous variables in the PLS-SEM model.

According to the literature (Hair et al., 2019), any reminders of the changes after the determination of the R^2 are attributed to other or erroneous variables not captured in the given model. The established criteria are that " R^2 of 0.25, 0.5 and 0.75 are considered as weak, moderate and substantial

respectively.” In addition to the R^2 , the f^2 statistics are used to explain how meaningful the significance of the relationship is in respect of its practical implications. Usually, effect size (f^2) of 0.02, 0.15 and 0.35 is seen as small, medium and large respectively.” While a predictive relevance (Q^2) of 0.02, 0.15 and 0.35 is considered as small, medium and large respectively.” In sum, a significant level of 5% or less or a t- statistic of 1.96 or higher is appropriate for a structural model. Basically, the Table 16 and Figure 3 presented the assessment of the structural model and the associated hypotheses that emanated from the model 1.

Table 16: Structural Results of the Model 1

Paths	Description	R	T stat	P values	Hypotheses/remarks	f^2	R^2	Q^2
Wellbeing	WB						0.571	0.560
Digital Leadership -> Wellbeing	DL -> WB	0.401	6.562	0.000	H1a: Confirmed	0.154		
Digital Knowledge -> Wellbeing	DK -> WB	0.273	4.495	0.000	H1b: Confirmed	0.268		
Digital Creativity -> Wellbeing	DC -> WB	0.158	2.935	0.003	H1c: Confirmed	0.229		

Source: Field Survey (2023)

The structural results presented in Table 16 revealed that the three hypotheses were upheld in the study. The results show that DL ($R = 0.401$; $t = 6.562$; $P < 0.001$), DK ($R = 0.273$; $t = 4.495$; $P < 0.001$) and DC ($R = 0.158$; $t = 2.935$; $P = 0.003$) variously had a significant positive relationship with WB at moderate effect sizes of $f^2 = 0.154$; 0.268 and 0.229 respectively at 2-tailed. The value documented for R^2 suggested that the DE through (DL, DK and DC) contributed over 57 percent (57.1%) of variations in the scores of the Wellbeing of the SMEs in selected areas in Ghana. In the same submission, the remaining percent points (42.9%) represents some other identifiable variables which were not captured in the present model. Finally, the value of the Q^2 was adequate and suggests that WB has a strong predictive capacity (0.560) on the overall model estimated.

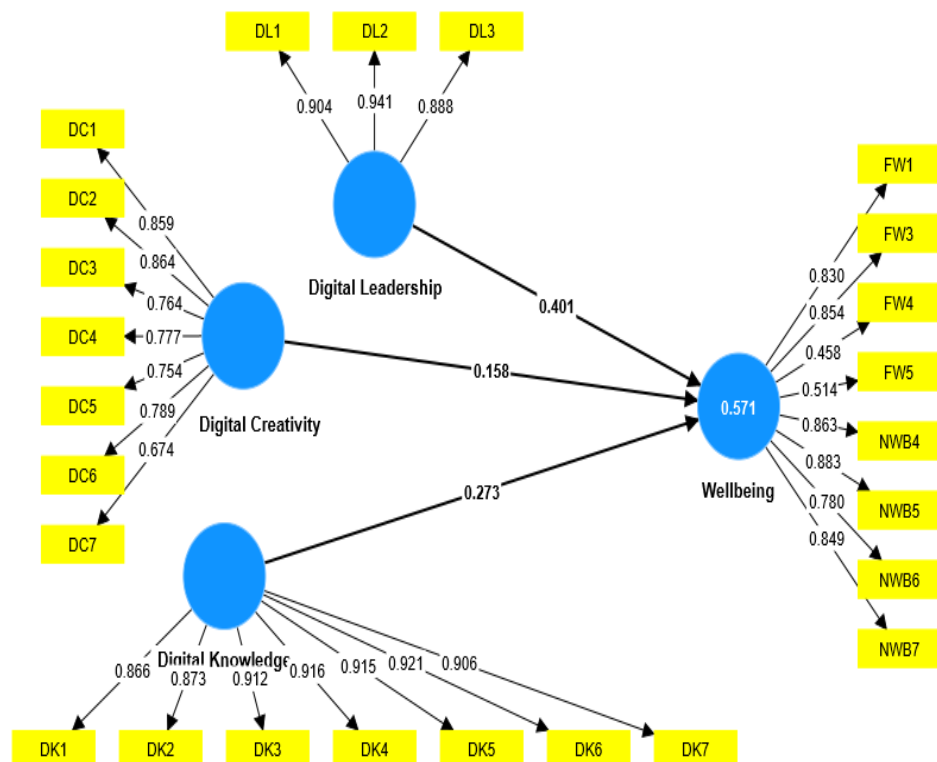


Figure 4: Linking digital entrepreneurship to owner-managers' well-being

Source: Field Survey (2023)

The Figure 4 presented pictorial summary output of the measurement and structural models of the first model. As shown, the various indicators measuring each of the unobserved constructs or latent variables were satisfactory. Similarly, the path coefficients, and the R^2 presented in Table 16 were confirmed in the figure.

Discussion of Results

This section discussed the results in relation to the hypotheses set in this chapter. The hypotheses capture the interplay of DL, DK, DC, and WB of the SME owner-managers in Ghana. Therefore, the study deduced implications based on the findings and provided pointers to SME owner-managers, stakeholders and the industry as whole. The discussions ensue.

Digital Leadership and Owner-Manager Wellbeing

The implication of these findings suggests that when owner-managers exhibit strong digital leadership capabilities, it has a prominent influence or impact on their overall wellbeing. Following this evidence, the study concurs that digital leadership will offer the owner-managers of SMEs the opportunity to streamline operations, automate routine tasks, and gain access to real-time data and insights, which in the long run will reduce their workload and stress levels. Given that the management is keen on leveraging digital tools and technologies in the operations of their firms, they can enhance productivity, make better-informed decisions, and achieve higher levels of efficiency.

Moreover, digital leadership empowers owner-managers to adapt to market changes and seize new opportunities, leading to increased job satisfaction and a sense of accomplishment, which in itself saves firms the cost associated with losing employees. Accordingly, when owners or managers

appreciate the use of emerging business technologies for monitoring business marketplaces and obtain information via digital platforms in order to develop partnerships and steer organisational resources towards providing solutions that fulfil client expectations (Braf & Melin, 2020; Zeike et al., 2019), that could improve the wellbeing of the businesses. Digital leadership will also foster innovation and creativity, allowing the managers of SMEs to stay ahead of competitors and drive business growth, which in turn contributes to their overall wellbeing (Freitas Junior et al., 2020; Cong & Thu, 2021). It is worth noting that managers or owners with digital leadership skills are better able to balance their personal and professional lives by providing flexibility and remote working options to keep the business running without interruptions.

The findings of the study corroborated the evidence found in Sheninger (2019), who viewed digital leadership as a propellant for enterprises' ability to adopt business models that shape communication across departments and different managerial levels to bring about greater customer satisfaction and clear direction. Similarly, Cong and Thu (2021) concluded in their study that leadership competences in technology and digital services offer customers cutting-edge products and services that boost the competitiveness and market share of firms and enhance the wealth of owners.

Theoretically, the study found expression in the TACT (Majchrzak & Markus, 2014), which submitted that when managers of firms break forth the constraints engulfing the adoption of technologies for firms' operations, incorporating an understanding of the features and functionalities of information technology will improve the firm's fortunes. Wiklund et al. (2019) also conducted a study on the relationship between digital entrepreneurship

and non-financial well-being and discovered that entrepreneurial well-being includes feelings of contentment, good emotions, occasional negative emotions, and a healthy psyche as they pertain to the process of creating, launching, expanding, and managing an enterprise in the digital era.

Digital Knowledge and Owner-Managers' Wellbeing

The second hypothesis of the study sought to analyse the effect of digital knowledge on owner-manager wellbeing in Ghanaian SMEs. The findings revealed that DK has a significant positive relationship with wellbeing ($R = 0.273$; $t = 4.495$; $P < 0.001$) with a moderate effect. Hence, H1b was supported. By observing the link between these variables, the study concludes that, all things being equal, a unit increase in the entrepreneurs' depth of digital knowledge will lead to a corresponding increase in their wellbeing by a margin of 0.273. The significant positive relationship between the digital knowledge of SMEs and owner-manager wellbeing highlights the impact of digital competencies on the overall well-being of individuals who own and manage these businesses.

Indeed, the revelations from these findings point to some insights for owner-manager wellbeing regarding their approach and depth of appreciation for the art of digital entrepreneurship in the present volatile business environment. Firstly, the findings project the critical importance of DK by emphasising that SME owners or managers possessing digital knowledge effectively utilise technology in their business operations. This DK, such as online marketing, customer relationship management, automations, e-commerce, data analytics, and communication tools, prompts the owner-managers to have an adequate grasp of these digital competencies. Thus,

reaching these outcomes provides a sense of accomplishment and satisfaction, which positively improves their overall well-being.

In addition, on the basis of the current digital landscape, owner-managers are more exposed to changing consumer preferences, market disruptions, identifying new opportunities, anticipating market shifts, and making informed strategic decisions that are appealing to customers. This level of agility and foresight instills confidence and reduces anxiety, contributing to enhanced well-being. By embracing e-commerce, social media, and other digital platforms, SMEs can extend their business reach beyond geographical limitations. This expansion not only leads to potential financial gains but also provides a sense of fulfilment and accomplishment for the owners, which could potentially promote their wellbeing.

Apparently, the TACT was confirmed in this study following that when owners begin to overlook the challenges bothering the adoption of digital tools and platforms for business operations, Typical of the Ghanaian SMEs' sector is the slower rate at which the firms are rolling out electronic platforms for business operations (Ndhlovu & Dube, 2023; Sarvari et al., 2021). Consistent with the theory, a radical digital transition approach to business practices will pave the way for the flexibilities that come with digital tools, remote work, and accessing critical business information from anywhere for owner-managers. Through these, the SMEs can make connections to valuable knowledge sharing and collaborations among themselves to uplift the overall performance of the SME sector.

The study's findings come in tandem with previous studies (Sudario & Salumintao, 2022; Franco et al., 2021), who argued that SMEs exploring

digital entrepreneurship spur the managerial competences and digitalization drive for the good of the owners and the sector. For instance, Franco et al. (2021) found that digital entrepreneurship fosters innovation and creativity within SMEs to stay ahead of competitors and adapt to market changes. Based on the foregoing, owners and managers of SMEs are expected to subject themselves to improving digital knowledge through personal development initiatives, learning to enhance decision-making, and productivity.

Digital Creativity and Owner-Managers' Wellbeing

The last hypothesis that was derived from the first model of the study was to assess how digital creativity as a component of digital entrepreneurship can influence the wellbeing of owner-managers and SMEs in Ghana. Following the analysis performed through the PLS-SEM, the results derived show that digital creativity has a significant positive relationship with WB and also has a moderate effect on the scores of WB ($R = 0.158$; $t = 2.935$; $P = 0.003$; $f^2 = 0.229$).

Admittedly, the finding was sufficient to confirm the H1c postulated in the study, indicating that, as a whole, DC predicts WB and should be paid attention to by players in SME firms in Ghana. Thus, the significant positive relationship between digital creativity in SMEs and owner-manager wellbeing highlights the transformative impact of harnessing digital tools and platforms to foster innovation and creative thinking. Concisely, embracing digital tools and platforms requires owner-managers to think critically, analyse complex problems, and adapt to new technologies for the purposes of improving the life of the business.

Undeniably, with the rapidly evolving digital space, SMEs are presented with several constraints on businesses, including consumer preferences and market disruptions that require owner-managers who will embrace digital creativity quickly to adjust to these changes to exact excellence. These promote a sense of accomplishment and reduce anxiety, thereby positively impacting owner-managers' wellbeing. Situating the findings in the dynamic capability theory perspective, the present study concludes that firms will be strategically positioned when the owners and managers establish and refine a sustainable business model that guides the development of the enterprise through creativity. In so doing, they will gain profits sufficient to enable the firms to continue operations and enhance their capabilities and resources. Also, given that this finding is novel, this study draws the conclusion that when SMEs leverage digital tools and platforms, it will foster innovation and creative thinking to enhance wellbeing.

Chapter Summary

The study in this chapter presented information on the demographic characteristics of the respondents and SMEs sampled, as well as the normality of the data. To ensure that the responses obtained from the respondents were free from abnormal data points, skewness and kurtosis values were used to check for data normality. The study also presented descriptive statistics of the variables, and with the use of PLS-SEM, analysis of Model 1 was done. In summary, the findings show that digital leadership, knowledge and creativity predict the wellbeing of owner-managers of SMEs in Ghana. The next chapter then addressed the research hypotheses of Model 2.

CHAPTER FIVE

INTELLECTUAL CAPITAL AND WELL-BEING

Introduction

The purpose of this chapter is to discuss the effect of intellectual capital (i.e., human, organisational and relational capital) on SMEs owner-managers' well-being in Ghana. By relying on the efficacies of the PLS-SEM analytic technique, the results were presented following the relevant quality criteria and interpreted accordingly. The hypotheses addressed in the chapter generally connect the direct links between intellectual capital dimensions and wellbeing. Thus, the hypotheses tested collectively, referred to as 'Model 2', include the following:

H2a: There is a significant effect of human capital on the well-being of SME owner-managers.

H2b: There is a significant effect of organisational capital on well-being of SME owner-managers.

H2c: There is a significant effect of relational on well-being of SME owner-managers.

First, the measurement model assesses the indicator loadings, the construct's reliability and validity, and discriminant validity. Then, the structural model for testing the hypotheses was followed. The results were presented in tables and figures that ensued. Table 16 captures the results of the indicator loadings and common method biases of each of the factors.

Table 17: Item Loadings and Collinearity for Model 2

Items/constructs	Loadings	T stat	P values	VIF
Wellbeing (WB)				
FW1 <- Wellbeing	0.829	44.051	0.000	2.807
FW3 <- Wellbeing	0.854	55.924	0.000	2.718
FW4 <- Wellbeing	0.463	9.122	0.000	1.220
FW5 <- Wellbeing	0.514	11.601	0.000	1.346
NWB4 <- Wellbeing	0.864	59.908	0.000	3.783
NWB5 <- Wellbeing	0.884	81.588	0.000	3.785
NWB6 <- Wellbeing	0.776	31.418	0.000	2.053
NWB7 <- Wellbeing	0.848	46.878	0.000	2.688
Human Capital (HC)				
HC1 <- Human Capital	0.881	49.853	0.000	3.119
HC2 <- Human Capital	0.907	78.427	0.000	3.745
HC3 <- Human Capital	0.948	173.330	0.000	4.811
HC4 <- Human Capital	0.946	141.727	0.000	3.550
HC5 <- Human Capital	0.941	153.019	0.000	4.031
Organisational Capital (OC)				
OC1 <- Organisational Capital	0.916	110.714	0.000	4.916
OC2 <- Organisational Capital	0.871	51.732	0.000	3.938
OC4 <- Organisational Capital	0.829	38.819	0.000	2.244
OC5 <- Organisational Capital	0.862	63.478	0.000	2.410
OC6 <- Organisational Capital	0.717	29.177	0.000	1.624
Relational Capital (RC)				
RC1 <- Relational Capital	0.883	56.559	0.000	2.737
RC2 <- Relational Capital	0.924	95.581	0.000	3.840
RC3 <- Relational Capital	0.883	70.710	0.000	2.729
RC4 <- Relational Capital	0.896	77.946	0.000	2.926

Source: Field Survey (2023)

The results from the Table 17 shown that all the indicators of the constructs have met the minimum thresholds. Indicator loading outside of the 0.70 threshold have demonstrated good contribution to the reliability of the

model and hence, were retained. On the other hand, factors which did not meet these criteria, either were lower than 0.70 or failed to prove contributory relevance to the AVE of the constructs were deleted. Furthermore, we see from the table that the VIFs of each of the factors were ‘okay’ as the scores were less than 5.0 provided for by Becker et al. (2015). The next table, Table 18 presented the results of the constructs’ reliability (internal consistency) and validity.

Table 18: Constructs’ Reliability and Validity for Model 2

Constructs	CA	rho_A	CR	AVE
Human Capital	0.957	0.960	0.967	0.855
Organisational Capital	0.896	0.911	0.924	0.709
Relational Capital	0.918	0.919	0.942	0.804
Wellbeing	0.894	0.922	0.918	0.593

Source: Field Survey (2023)

First and foremost, the results captured in the Table 18 have shown that the internal consistency of the constructs was upheld. This is because the scores of the three indices measuring the reliability of the constructs were within the 0.70 cut-off point. For instance, a cursory look at the CR values for the main variables comprising human capital (0.967), organisational capital (0.924), relational capital (0.942) and wellbeing (0.918) reveal that they satisfied the benchmarks. In addition, the condition for evaluating the convergent validity of the constructs was met in the study. Following the $AVE \geq 0.50$ rule, the study established that the constructs satisfactorily converge at good point. The results in the next Tables 18 and 19 reported on the discriminant validity.

Table 19: Fornell-Larcker criterion for Model 2

Constructs	HC	OC	RC	WB
HC	0.925			
OC	0.842	0.869		
RC	0.742	0.772	0.896	
WB	0.723	0.727	0.763	0.770

Source: Field Survey (2023)

In light of the Fornell-Larcker criterion, the DV of the constructs was not problematic in the study. As seen, the bolded values reflected the principle of the criteria, such that the correlation of a variable against itself was higher with other variables. Similar

Table 20: Heterotrait-monotrait ratio (HTMT) for Model 2

Constructs	HC	OC	RC	WB
HC				
OC	0.900			
RC	0.791	0.844		
WB	0.774	0.795	0.830	

Source: Field Survey (2023)

The HTMT ratios displayed in the Table 20 are satisfactory as they provide good indication that the constructs were unique and different from another. On that note, the measurement model has been generally validated and proved ideal for further analysis. In light of the results, the study proceeded to discuss the hypotheses based on the results of the structural model presented in Table 21.

Table 21: Structural Results of Model 2

Paths	R	T stat	P	Hypotheses	f^2	R^2	Q^2
WB						0.642	0.634
HC-> WB	0.238	3.404	0.001	H2a: Confirmed	0.037		
OC-> WB	0.168	2.488	0.013	H2b: Confirmed	0.017		
RC-> WB	0.456	7.891	0.000	H2c: Confirmed	0.223		

Source: Field Survey (2023)

The structural results captured in the Table 21 revealed that the hypotheses were supported in the study. precisely, the results portrayed that HC ($R = 0.238$; $t = 3.404$; $P = 0.001$), OC ($R = 0.168$; $t = 2.488$; $P = 0.013$) and RC ($R = 0.456$; $t = 7.891$; $P < 0.001$) respectively made significant positive relationship with WB at small effect sizes of $f^2 = 0.037$ and 0.017 for the HC-> WB and OC-> WB respectively, while RC-> WB had moderate effect ($f^2 = 0.223$), all at 5% 2-tailed significance level. Furthermore, the results suggested that the intellectual capital in the form of HC, OC and RC collaboratively contributed to over 60 percent (64.2%) of variations in the scores of the well-being of the SMEs in selected areas in Ghana. In the same vein, the remaining percent points (35.8%) was accounted for some other variables which were not captured in the current study. Finally, the value of the Q^2 was adequate and suggests that WB has a strong predictive capacity (0.634) on the overall model estimated.

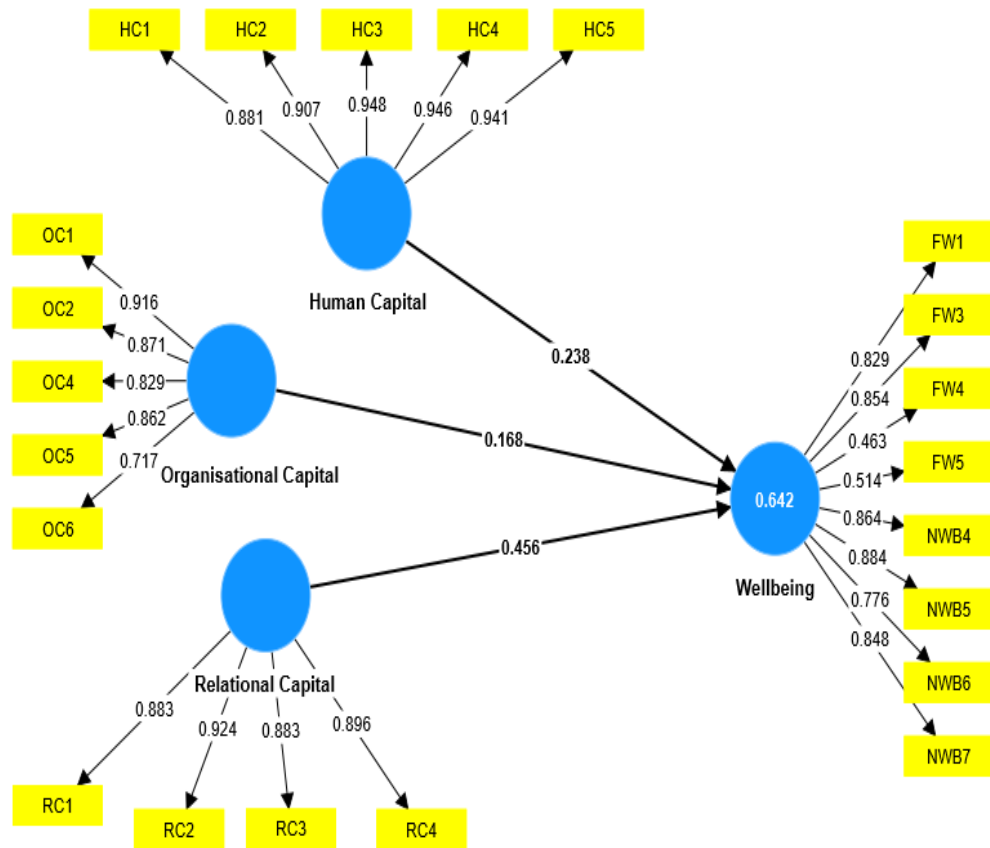


Figure 5: Linking intellectual capital to wellbeing

Source: Field Survey (2023)

In the Figure 5, the pictorial summary output of the measurement and structural models of the second model were presented. As shown, the various indicators measuring each of the unobserved constructs or latent variables were satisfactory. Similarly, the path coefficients, and the R^2 presented in Table 21 were confirmed in the figure.

Discussion of Hypotheses

Broadly, the second model of the study analysed the influence of intellectual capital on the wellbeing of owner-managers of SMEs in Ghana. Intellectual capital refers to the combined value of a company's intellectual assets, including human capital, structural capital, and relational capital, to promote the operations of the firm. These major areas of intellectual capital were hypothesised to define their link with the wellbeing of SMEs. Therefore,

three sub-hypotheses (H2a, H2b and H2c) were derived to address the objective stipulated. The sections that ensued were designed to discuss the results of each hypothesis.

Human Capital and Wellbeing of Owner-Managers' of SMEs

The study anticipated that the human capital of the SMEs in Ghana would positively relate to their wellbeing. The results of the study were consistent with the H2a set and supported the finding that HC has a significant relationship with WB ($R = 0.238$; $t = 3.404$; $P = 0.001$). This finding shed light on the crucial role of employee knowledge, skills, and expertise in driving the overall wellbeing of persons who own and manage SMEs. As espoused earlier, human intellectual capital captures the organisation's employees' knowledge, abilities, and experiences (Edvinsson, 1997) and the extent to which these resources can be harnessed to profit the organisation (Mubarik et al., 2018).

In light of the findings in this study, it is instructive to suggest that the presence of strong human capital in SMEs will enhance owner-manager confidence and self-efficacy to navigate challenges, make informed decisions, and lead their businesses to excel both financially and in terms of esteemed customer acceptance. At the firm level, when owner-managers invest in their own personal development and that of their employees through training programmes, educational opportunities, mentoring, and continuous learning initiatives, they enhance the human capital of the organisation. Consequently, the presence of this strong human capital not only leads to improved business performance but also contributes to owner-manager wellbeing by fostering a sense of hope, goal directions and knowledge security.

In addition, previous studies (Eresia-Eke & Okerue, 2020) documented that when owner-managers invest in the development and wellbeing of their employees, it creates a positive work environment, enhances employee morale, and reduces turnover to improve business prosperity. Furthermore, in the spirit of intellectual capital theory (Khalique et al., 2013), human capital contributes to owner-manager wellbeing through enhanced problem-solving and decision-making capabilities. With a strong foundation of knowledge and skills, owner-managers can draw from the expertise of their employees to assess risks, evaluate alternative strategies, and develop effective solutions to reduce uncertainty and positively affect owner-manager well-being.

Organisational Capital and Well-being of Owner-Managers of SMEs

This section discussed the outcome of H2b, which examined the effect of organisational capital on the wellbeing of SMEs in Ghana. As with the direction of the hypothesis, the results revealed that organisational capital had a significant positive relationship with wellbeing supporting H2b ($R = 0.168$; $t = 2.488$; $P = 0.013$). This means that organisational capital, which revolves around the effectiveness of a firm's systems, procedures and intellectual property, contributes to owner-manager wellbeing within SMEs.

Technically, when owner-managers commit adequate resources to having well-designed structures and processes such as databases, intranets, and other digital platforms to store and share information, best practices, and lessons learned protocols in place, they streamline operations, promote efficiency, and reduce the burden on owner-managers. With such a system, the SMEs are able to empower the employees as well as monitor their progress

and the running of the business to enhance balance of work and owner-manager well-being.

As claimed by Khalique et al. (2013), organisational capital serves as a glue that holds everything together in any organisation, and for that matter, the firm's organisational capital is an important asset in the current business environment. Juxtaposing the findings with the intellectual capital theory, any time owners of SMEs take the initiative to create, extend, or modify their means of operation, these will enhance performance and long-term innovation aimed at generating value for firms and improving wellbeing. In another study on the perceptions of managers of SMEs regarding intellectual capital and enterprise managers' well-being, Gross-Goacka et al. (2021) found that intellectual capacity optimises the intangible assets and knowledge-based resources to drive personal growth in firms.

Relational Capital and Well-being of Owner-Managers of SMEs

Finally, the study discussed the last hypothesis that emanated from the second model. H2c connected the link between relational capital and the wellbeing of SMEs in the sampled metropolises in Ghana. The PLS-SEM was deployed to test the hypothesis. The results show that relational capital ($R = 0.456$; $t = 7.891$; $P < 0.001$) has a significant positive relationship with WB. This means that the nature of relational capital, if properly acquired by firms, will capture goodwill for firms to improve their wellbeing. Accordingly, relational capital entails assets created and embedded in relationships based on the collective goal and mutual interest between a firm and its stakeholders, such as customers and suppliers (Claridge, 2018; Manning, 2017), which enable knowledge sharing to project the firm.

Precisely, the findings imply that building strong relationships with customers, suppliers, industry peers, and other stakeholders creates a supportive and collaborative business environment that provides owner-managers with access to resources, knowledge, and opportunities that can contribute to business success. Additionally, having a positive reputation in the industry enhances owner-manager well-being by fostering a sense of pride, credibility, and professional satisfaction (Rožman et al., 2022). Dal Mas et al. (2019) also revealed that strong relationships with suppliers, customers, and business partners can provide women entrepreneurs with access to critical resources such as funding, expertise, and information for prosperity.

Entrepreneurs who have developed robust relational capital can tap into these resources to overcome challenges, seize opportunities, and enhance their ventures' performance. Finally, the study concludes that the significant influence of relational capital on SMEs owner-manager wellbeing highlights the crucial role that relationships and networks play in business growth and admonishes owners to lay hold of strategies to enhance it.

Chapter Summary

In summary, the study has found evidence to support the hypotheses set and added to the literature on factors that predict the wellbeing of SMEs owners and managers in the sector. The study emphasised in the chapter that intellectual factors, which manifest through human, organisational and relational dimensions, are factors of wellbeing. The findings were discussed and supported by previous literature. The next chapter analysed the role of intellectual capital in the link between digital entrepreneurship and SMEs wellbeing in Ghana.

CHAPTER SIX

DIGITAL ENTREPRENEURSHIP, INTELLECTUAL CAPITAL AND WELL-BEING

Introduction

The purpose of this chapter was to analyse the mediating role of intellectual capital (IC) in the link between the dimensions of DE and WB, i.e. Model 3. The hypotheses that were postulated to address the link were in the manner as stated;

H_{3a}: Intellectual capital mediates the nexus between digital leadership and well-being.

H_{3b}: Intellectual capital mediates the nexus between digital knowledge and well-being.

H_{3c}: Intellectual capital mediates the nexus between digital creativity and well-being.

By leveraging the PLS-SEM through the procedures in the measurement and structural model, the findings were discussed and supported with relevant literature. Firstly, the indicator loadings together with common method biases, internal consistency and convergent validity test and discriminant validity, all, indices of measurement model were assessed. The next stage was assessment of the structural model using same parameters outlines in previous chapters. In Table 22, the factors for the constructs were checked for reliability and common method bias issues.

Table 22: Outer Loadings and Common Method Biases for Model 3

Items	Loadings	T stat	P values	VIF
Digital Creativity				
DC1 <- Digital Creativity	0.860	68.590	0.000	2.688
DC2 <- Digital Creativity	0.864	73.793	0.000	2.814
DC3 <- Digital Creativity	0.767	28.773	0.000	1.935
DC4 <- Digital Creativity	0.777	37.951	0.000	1.927
DC5 <- Digital Creativity	0.749	30.446	0.000	1.876
DC6 <- Digital Creativity	0.791	37.308	0.000	2.129
DC7 <- Digital Creativity	0.673	18.439	0.000	1.738
Digital Knowledge				
DK1 <- Digital Knowledge	0.866	42.947	0.000	3.239
DK2 <- Digital Knowledge	0.873	44.263	0.000	3.350
DK3 <- Digital Knowledge	0.912	69.252	0.000	4.932
DK4 <- Digital Knowledge	0.917	75.877	0.000	4.640
DK5 <- Digital Knowledge	0.915	85.830	0.000	4.711
DK6 <- Digital Knowledge	0.921	75.103	0.000	5.846
DK7 <- Digital Knowledge	0.906	95.305	0.000	4.248
Digital Leadership				
DL1 <- Digital Leadership	0.905	83.372	0.000	2.666
DL2 <- Digital Leadership	0.941	159.117	0.000	3.827
DL3 <- Digital Leadership	0.888	53.646	0.000	2.640
Wellbeing				
FW1 <- Wellbeing	0.830	44.460	0.000	2.807
FW3 <- Wellbeing	0.854	56.114	0.000	2.718
FW4 <- Wellbeing	0.464	9.164	0.000	1.220
FW5 <- Wellbeing	0.512	11.439	0.000	1.346
NWB4 <- Wellbeing	0.864	60.228	0.000	3.783
NWB5 <- Wellbeing	0.884	80.797	0.000	3.785
NWB6 <- Wellbeing	0.777	31.660	0.000	2.053
NWB7 <- Wellbeing	0.848	47.104	0.000	2.688
Intellectual Capital				
HC1 <- Intellectual Capital	0.827	38.172	0.000	3.260
HC2 <- Intellectual Capital	0.849	49.213	0.000	3.975
HC3 <- Intellectual Capital	0.897	88.591	0.000	4.099
HC4 <- Intellectual Capital	0.904	88.785	0.000	4.587
HC5 <- Intellectual Capital	0.905	92.071	0.000	3.011
OC1 <- Intellectual Capital	0.895	94.828	0.000	3.328
OC2 <- Intellectual Capital	0.845	45.468	0.000	4.752
OC4 <- Intellectual Capital	0.766	29.964	0.000	2.317
OC5 <- Intellectual Capital	0.826	50.481	0.000	3.041
OC6 <- Intellectual Capital	0.627	21.529	0.000	1.666
RC1 <- Intellectual Capital	0.774	30.085	0.000	2.888
RC2 <- Intellectual Capital	0.815	42.236	0.000	4.123
RC3 <- Intellectual Capital	0.775	37.156	0.000	2.941
RC4 <- Intellectual Capital	0.822	44.922	0.000	3.421

Source: Field Survey (2023)

From Table 22, it can be revealed that all the various indicators of the constructs have met the thresholds. Particularly, those that are below 0.70 are seen as appropriate to be included in the model due to their contributions to improving the model's reliability. Also, a cursory look at the values of VIF reveal the absence of CMBs in the respondents' responses since each indicator of the constructs was well within the 5.0 cut-off point. The next table, Table 23 presented findings on the internal consistency and discriminant validity of the model's constructs.

Table 23: Assessing Reliability and Validity for Model 3

Constructs	CA	rho_A	CR	AVE
Digital Creativity	0.896	0.918	0.918	0.617
Digital Knowledge	0.962	0.962	0.968	0.813
Digital Leadership	0.898	0.902	0.936	0.831
Intellectual Capital	0.963	0.966	0.968	0.683
Wellbeing	0.894	0.923	0.918	0.593

Source: Field survey (2023)

The CA, rho_A and CR values in the Table 23 show that internal consistency, in other words, constructs' reliability was achieved. These values have attained the minimum 0.70 threshold established by Hair et al. (2019). Moreover, the results in the Table 22 demonstrated that the constructs have achieved mutual relationships among themselves based on their AVEs. Thus, the AVEs of the major constructs, DC, DK, DL, IC and WB were respectively above the minimum 50 percent criteria. Finally, under the measure model, Tables 24 and 25 was deployed to test for discriminant validity through the Fornell-Larcker criterion and HTMT ratio.

Table 24: Fornell-Larcker criterion for Model 3

Constructs	DC	DK	DL	IC	WB
DC	0.785				
DK	0.730	0.902			
DL	0.713	0.714	0.911		
IC	0.685	0.698	0.752	0.826	
WB	0.643	0.675	0.708	0.760	0.770

Source: Field survey (2023)

Through the lens of Fornell-Larcker criterion, the DV was acceptable for advanced analysis of the variables. Each construct in the table passed the DV test.

Table 25: Heterotrait-monotrait ratio (HTMT) – Matrix

Constructs	DC	DK	DL	IC	WB
DC					
DK	0.772				
DL	0.777	0.765			
IC	0.716	0.724	0.804		
WB	0.683	0.714	0.781	0.841	

Source: Field survey (2023)

The results emanating from HTMT ratios in Table 25 show that discriminant validity issues were not present. As with the rule of thumb the 0.90 thresholds for unrelated constructs was met. The next tables and figure presented the assessment of the structural model and the associated hypotheses that emanated from the third model of the study

Mediation Analysis

Mediation analysis is conducted to ascertain the other factors that can be used as mechanisms through which the exogenous variables can indirectly influence the endogenous variables (Wong, 2019). The mediation procedure in PLS-SEM follows the significance of the direct and indirect effects of the independent variable on the dependent variable. Nitzl et al. (2016) say that you can find mediation effects by looking at how well the direct and indirect paths of the exogenous and endogenous variables work.

To differentiate between the three types of mediation, i.e., full, partial and no mediation, the scholars claimed that both the direct and indirect columns should meet certain criteria. For full mediation, the direct path must be non-significant while the indirect path is significant. For partial mediation, both the direct and indirect paths should be significant, while no mediation is where both the direct and indirect paths are not significant. As part of the structural results in Table 26, mediation analysis was captured. These were represented in the indirect link column, following all other relevant criteria.

First, the direct links were presented to provide guidance to the mediation types existing among the three hypotheses set for model 3. By observing the results in Table 26, the link between DC and WB was non-significant ($p = 0.205$), while its corresponding indirect was found significant (DC \rightarrow IC \rightarrow WB; $p = 0.003$). This satisfied the first condition stated above. The rest of the links in the direct and indirect columns were significant and thus also intercepted the second condition for meditation. The third condition was not found. The detailed descriptions were provided beneath Table 26.

Table 26: Structural Output for Model 3

Paths	R	t	ρ	Hypotheses	f^2	R^2	Q^2
WB						0.668	0.560
IC						0.633	0.625
<i>Direct links</i>							
DC -> IC	0.196	3.264	0.001	Significant	0.041		
DC -> WB	0.055	1.266	0.205	Not	0.003		
DK-> IC	0.242	4.017	0.000	Significant	0.062		
DK -> WB	0.150	2.939	0.003	Significant	0.025		
DL -> IC	0.440	7.537	0.000	Significant	0.217		
DL -> WB	0.172	3.246	0.001	Significant	0.030		
IC -> WB	0.518	9.781	0.000	Significant	0.297		
<i>Indirect links</i>							
DL -> IC -> WB	0.228	6.250	0.000	H3a: Confirmed			
DK -> IC -> WB	0.125	3.714	0.000	H3b: Confirmed			
DC -> IC -> WB	0.101	2.968	0.003	H3c: Confirmed			

Source: Field Survey (2023)

The structural results presented in Table 26 revealed that the three hypotheses were upheld in the study. The results show that DL ($R = 0.228$; $t = 6.250$; $P < 0.001$), DK ($R = 0.125$; $t = 3.714$; $P < 0.001$), and DC ($R = 0.101$; $t = 2.968$; $P = 0.003$) variously had a significant positive relationship with WB through IC. Judging from the results both in the direct and indirect columns, the study established that IC played a partial mediation role in the relationship between DL and WB and DK and WB. On the other hand, the findings show that IC has a full mediation mechanism for the established link between DC and WB.

Moreover, the results suggested that the DE (DL, DK and DC) and intellectual capital in the form of HC, OC and RC collaboratively contributed to over 66 percent (66.8%) of the variations in the scores of the well-being of the SMEs in selected areas in Ghana. In the same vein, the remaining percentage points (33.2%) accounted for some other variables that were not captured in the current study. Moreover, the findings show that 63.3 percent of variations in the IC are accounted for by DE. Finally, the value of Q^2 was adequate and suggests that WB (0.560) and IC (0.625) both have substantial predictive relevance for the overall model estimated.

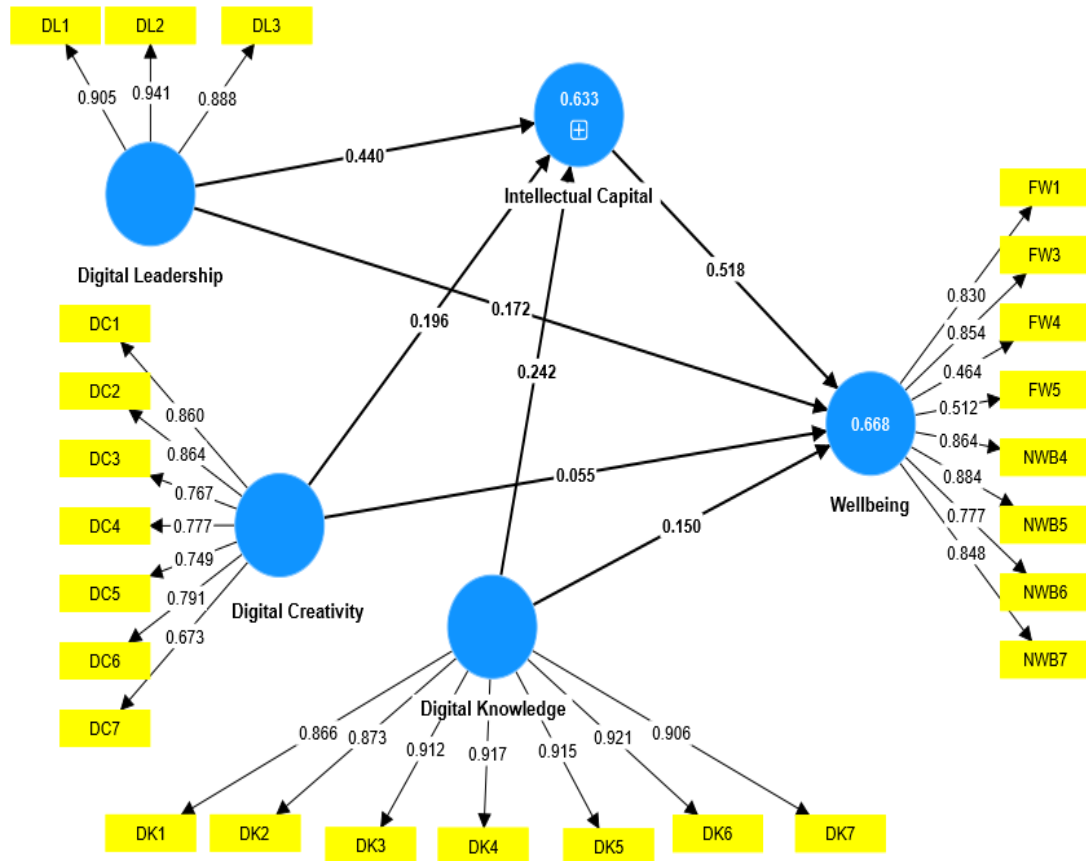


Figure 6: Linking digital entrepreneurship to well-being through intellectual capital

Source: Field Survey (2023)

Digital Leadership, Intellectual Capital and Well-being

The study examined the mediating role of intellectual capital in the nexus of digital leadership and the wellbeing of SMEs in Ghana. After analysing the data collected from the owners and managers of the SMEs, it was demonstrated that intellectual capital made a significant partial mediation in the relationship between the DL and WB ($R = 0.228$; $t = 6.250$; $P < 0.001$); hence, H3a was supported in the study. The finding suggests that intellectual capital is an essential element that can facilitate the process of digital leadership to enhance entrepreneurs and firms' well-being. By developing the human assets of the firms and putting in place structures that foster innovation,

the individuals or employees of the firms are able to use the digital tools and platforms to attract customer satisfaction.

In addition, intellectual capital in the form of relational capital can play a crucial role in facilitating the knowledge sharing, collaboration, and collective problem-solving created by digital leadership to eventually enhance the well-being of SME owner-managers. Since digital technologies enable owner-managers to connect with employees, partners, and external stakeholders, it goes to buttress the fact that when owner-managers of SMEs build a strong human and structural capital base, the employees are able to interact with the systems and stakeholders to foster the overall performance of the firms.

The findings consistently support the position held by Anwar and Daniel (2016) and Pejic Bach et al. (2018) that firms with a strong intellectual capital base, characterised by knowledge sharing, innovation, and effective decision-making processes, have owner-managers who experience higher levels of satisfaction and fulfilment in their roles. These firms are able to create an environment that leverages digital leadership to empower employees and strengthen customer and supplier databases, resulting in improved wellbeing outcomes for owner-managers.

In summary, the finding underscores the importance of developing and leveraging intellectual capital within SMEs as a means to enhance the well-being of owner-managers. Recognising the importance of intellectual capital can help SMEs optimise their digital leadership initiatives and foster a supportive knowledge-sharing environment to enhance owner-manager wellbeing.

Digital Knowledge, Intellectual Capital and Well-being

The section sought to discuss the research hypothesis H3b of the study, which was postulated as “*Intellectual capital mediates the nexus between digital knowledge and well-being*”. The analysis of the results demonstrated that intellectual capital has a mediation effect on the link between digital knowledge and wellbeing of owner-manager of SMEs in Ghana ($R = 0.125$; $t = 3.714$; $P < 0.001$). The findings of the study acknowledged the essence of human, organisational and relational capital development among SMEs. This is because intellectual capital facilitates the transformation of creative ideas into tangible outcomes, providing entrepreneurs with the necessary resources, knowledge, and networks to navigate challenges and seize opportunities. By fostering intellectual capital, entrepreneurs can enhance their wellbeing, as it enables them to access support systems, develop skills, and build networks that promote personal and professional growth.

Since this finding is pioneering in literature and especially the Ghanaian SMEs’ sector, it sends some new signal to managers of the firms cultivate and utilise intellectual capital resources. Owner-managers who effectively leverage their intellectual capital can maximise the benefits of digital knowledge, enhance their capabilities, and promote their own wellbeing.

Digital Creativity, Intellectual Capital and Wellbeing

The section documented the implications drawn from the findings of the last hypotheses tested in Model 3. The main idea behind hypothesis H3c was to look into how intellectual capital can improve the health and happiness of owner-managers of small businesses, specifically from the point of view of

digital creativity. After testing the hypothesis through the mediation procedures in PLS-SEM, the study discovered that intellectual capital has a full mediation effect on the nexus of digital creativity and the well-being of owner-managers of SMEs in Ghana ($R = 0.101$; $t = 2.968$; $P = 0.003$). Thus, the finding suggests that the relationship between digital creativity and wellbeing is fully explained by the intellectual capital of firms.

The implication is that owner-managers need to focus on cultivating and leveraging their intellectual capital to fully benefit from the prosperity of the business. The finding also emphasises the transformative power of intellectual capital, as it becomes the primary vehicle through which SMEs can prosper and eventually translates into enhanced wellbeing for the owner-managers. It is prudent that SMEs create a conducive environment where employees can be developed and allocate resources to foster relational growth. This can involve providing training and development programmes, creating platforms for knowledge sharing and collaboration, and promoting a culture of innovation.

Chapter Summary

The chapter presented the results of the hypotheses built from model of the study. PLS-SEM models were developed to handle the various hypotheses. The assessment of the measurement and structural models of the PLS-SEM reveal that all required criteria were met. In analysing the various hypothesis, the results suggest that all the 3 hypotheses set were supported in the study. The hypotheses were discussed and backed by previous literature to shed light on the study's implications to the study setting.

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Overview

The chapter is the final part of the study, designed to present the summary, conclusions and recommendations derived from the findings. These conclusions and the recommendation are essential for making policy and managerial decisions for SMEs. Primarily, the general purpose of the study was to examine the influence of digital entrepreneurship on the wellbeing of owner-managers of SMEs in Ghana through the mediating role of the intellectual capital of the firms. As a result of the rapid growth of technology and digital platforms for business operations, scholars and policymakers have often advocated for measures firms in the SME sector can adopt to catch up with the rising changes in the business arena. Following these calls and in line with the purpose of the study, three objectives were developed to address the research problem. They are:

- 1a. examine the effect of digital leadership on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.
- 1b. examine the effect of digital knowledge on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.
- 1c. examine the effect of digital creativity on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.

Based on intellectual capital and SMEs owner-managers well-being, the objective was to;

- 2a. examine the effect of human capital on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.

2b. examine the effect of organisational capital on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.

2c. examine the effect of relational capital on the well-being of owner-managers of SMEs in the Greater Accra region of Ghana.

Based on the mediating role of intellectual capital on digital entrepreneurship and well-being of SMEs owner-managers, the objective was to;

3a. analyse the mediating effect of intellectual capital on the relationship between digital leadership and well-being of owner-managers of SMEs in the Greater Accra region of Ghana.

3b. analyse the mediating effect of intellectual capital on the relationship between digital knowledge and well-being of owner-managers of SMEs in the Greater Accra region of Ghana.

3c. analyse the mediating effect of intellectual capital on the relationship between digital creativity and well-being of owner-managers of SMEs in the Greater Accra region of Ghana.

These objectives were further developed into nine hypotheses, three from each objective and were collectively named Models 1, 2 and 3 respectively. For Model 1, the hypotheses were:

Hypothesis 1a: There is a significant effect of digital leadership on the well-being of SME owner-managers.

Hypothesis 1b: There is a significant effect of digital knowledge on the well-being of SME owner-managers.

Hypothesis 1c: There is a significant effect of digital creativity on the well-being of SME owner-managers.

For Model 2, the study developed these hypotheses:

Hypothesis 2a: There is a significant effect of human capital on the well-being of SME owner-managers.

Hypothesis 2b: There is a significant effect of organisational capital on the well-being of SME owner-managers.

Hypothesis 2c: There is a significant effect of intellectual capital on the well-being of SME owner-managers.

For the Model 3, the ensuing hypotheses were postulated:

Hypothesis 3a: Intellectual capital mediates the relationship between digital leadership and well-being of SME owner-managers.

Hypothesis 3b: Intellectual capital mediates the relationship between digital knowledge and well-being of SME owner-managers.

Hypothesis 3c: Intellectual capital mediates the relationship between digital creativity and well-being of SME owner-managers.

With the extensive literature review, appropriate methodological approaches (research methods) were deployed to test the hypotheses. Thus, methodologically, the study adopted the positivist paradigm for research and, in that manner, relied on a quantitative approach as well as an explanatory research design. The study targeted a population of 10,590, which comprised 5,725 and 4,865 SMEs (owner-managers) in the AMA and TMA, respectively. By using Yamane's sample size determination technique, a minimum of 385 with a 40 adjustment to 425 owners or managers were selected using the stratified random sampling technique.

Data was eventually gathered from 388 owner-managers of the SMEs, and with the help of SPSS and SMART PLS software, the collected data were

processed and analysed accordingly using the partial least square structural equation modeling (PLS-SEM). The summary of the findings is presented in the next section.

Summary of Key Findings

With respect to the first objective, the study found that digital leadership, digital knowledge and digital creativity variously had significant positive relationship with owner-managers wellbeing in the SMEs of Ghana. Thus, the three hypotheses that connected these variables each to wellbeing were supported. At a whole, the findings pointed to the generalised view that digital entrepreneurship predicts SMEs wellbeing. The findings made the implications that embracing digital technologies and entrepreneurial activities in the digital realm can have a beneficial impact on the wellbeing of business owners and managers. Also, digital entrepreneurship allows owners and managers to tap into new opportunities, reach a broader audience, and improve business performance leading to a good accomplishment and success of owners.

Furthermore, the study investigated the influence of intellectual capital on the wellbeing of SME owners in Ghana. Through the dimensions of intellectual capital, the study hypothesised that human capital, organisational capital and relational capital would have a significant positive influence on well-being. Indeed, the test of the hypotheses revealed that human capital, organisational capital and relational capital had a significant influence on the well-being of firms. Technically, the findings connote that intellectual capital, which captures specifically knowledge, skills, and intangible assets and business reputation with external stakeholders, serves as a valuable resource

that contributes to the success of firms as well as the satisfaction of owners and managers.

Concerning the third objective, which assessed the mediation role of intellectual capital in the relationship between digital entrepreneurship and well-being, two outcomes were documented. First, the study reported that intellectual capital had a partial mediation effect on the links between digital leadership and digital knowledge on the SME owner's well-being in the firms. Second, intellectual capital had a full mediation effect on the nexus between digital creativity and the SME owner's well-being in the firms. These findings demonstrate how profound intellectual capital development is for firms. They imply that since digital entrepreneurship is hinged on the skills and knowledge base of the entrepreneurs on the use of digital tools, these can be further enhanced when other partners of the firms and systems are well in place to foster collective interaction in the firms to grab business prosperity.

Conclusions

In lieu of the numerous business challenges that bedevil the SME sector in Ghana and the dearth of literature on the role of digital entrepreneurship in addressing the challenges, the present study was designed to assess how the activities of digital entrepreneurship, along with intellectual capital, could tackle the problems. Consequently, the evidence found in the study demonstrated that SMEs could leverage digital entrepreneurship and intellectual capital to promote wellbeing. Given these unique findings, several conclusions and implications were drawn to help curb some of the constraints of SMEs in the business arena.

Firstly, SME owners should recognise the profound need to embrace digital technologies on a personal and firm level, such as service automations, point-of-sale services, and customer and supplier databases, to advance business operations. By adopting digital leadership practices, owners and managers will be able to effectively navigate the business landscape, capitalise on emerging opportunities, and drive innovation. When the owners acquire digital knowledge and apply it to their firms, they will optimise business processes and stay competitive in the digital era, resulting in enhanced business and owner overall wellbeing.

Furthermore, it is instructive that firms use digital platforms to generate novel ideas, adapt to changing market demands, and foster a culture of innovation. This means that the owner-managers form the centre within which the firms can excel, given that the business era has recently been controlled by technology. Hence, the study concludes that the owners should harness the potential of digital entrepreneurship to drive business success and wellbeing in the increasingly digital world.

Moreover, the study concludes that SME owners and managers should make intellectual capital development a priority as it creates an environment that fosters employee growth, collaboration among other business partners, and innovation leading to enhanced wellbeing. Through seeking the welfare of the employees, they are able to, in the spirit of the skills they acquire in the process, apply the skills that will add goodwill to the firm. Likewise, good customer service and well-laid organisational structures will create a forum for customers, suppliers and other partners to interact with the firms.

Finally, the study concluded that digital entrepreneurship could facilitate intellectual capital development, which in turn can lead to the wellbeing of SMEs and their owners. Clearly, when firms promote digital entrepreneurship, the process will facilitate intellectual capital development because automating the activities of the firms will enhance the efforts of the firms in tracking the skills of the employees, coordinating the organisation's systems, and cataloguing proper records of clients. Therefore, intellectual capital serves as a catalyst that could translate the activities of SMEs onto digital platforms to enhance the wellbeing of owners and managers.

Contributions to Knowledge

The study contributes significantly to the theoretical understanding of digital entrepreneurship and its influence on SME owner-managers' well-being, particularly through the lens of intellectual capital. This research integrates digital entrepreneurship and intellectual capital to show how human, organisational, and relational capital mediate the relationship between digital entrepreneurial activities and SME owner-manager well-being. Additionally, it enhances intellectual capital theory by demonstrating its pivotal role in enhancing SME owner-managers' well-being

From a managerial perspective, this study offers actionable insights for SME owner-managers striving to thrive in a digitally driven business environment. This study emphasizes intellectual capital and shows how to use human (skills and knowledge), organisational (processes and technology), and relational (networks and connections) capital to improve owner-managers well-being and company performance. These findings can help SME owner-managers prioritise employee training, technology adoption, and network

building to maintain competitive advantage and personal well-being as they engage in digital entrepreneurship.

The study contributes to policy by enjoining on government of Ghana through its agencies to develop and implement frameworks that promote digital entrepreneurship while safeguarding the well-being of SME owner-managers. The findings emphasise the need for policies that promote digital entrepreneurship in SMEs, particularly in Ghana. The findings highlight the need for government agencies such as Ghana Enterprise Agency and educational institutions to fund and support Ghanaian digital entrepreneurs. It also recommends extensive educational and training courses to improve SME owners-managers' digital and intellectual skills. These insights can be used by policymakers to address digital entrepreneurship challenges and promote SMEs' growth and sustainability.

Recommendations

The study investigated the mediating role of intellectual capital in the link between digital entrepreneurship and the well-being of SME owner-managers in Ghana. Based on the significant findings presented in the study, these recommendations are made to contribute to the development of the SMEs' sector in Ghana through literature, and theory and practice.

The study recommends that SME owners and managers should invest in digital entrepreneurship to capitalise on the immense transformation that it brings to business operations. The SME owners and managers can do that by employing digital marketing strategies such as social media marketing, digital payment options, and electronic commerce platforms to enhance their reach and efficiency. Thus, the inclusion of digital entrepreneurship in the SMEs'

firms exposes the firms to new business models, reaches a wider customer base, reduces theft and increases the goodwill of the firms.

Again, it is recommended that the digital skills and knowledge of the owner-managers, together with the employees, be developed to match up with the trends in digital entrepreneurship. This can be done by rolling out digital skills or literacy programmes in the firms by means of workshops, short courses, and training seminars to equip all the internal stakeholders. These can foster an environment where new ideas are encouraged and valued and lead to increased satisfaction among owners and business prosperity as a whole.

Moreover, SME owner-managers should invest in human, organisational and relational capital development. The firms should regularly roll out training programmes, workshops, and educational opportunities for employees, as these could improve their decision-making and problem-solving skills and serve external stakeholders well. In addition, the SME owner-managers should establish and sustain good relationships with customers, suppliers, partners, and industry stakeholders to enhance intellectual capital and overall well-being in the firms.

Furthermore, given the great contribution of SMEs to Ghana's economy and in light of the study's findings, the study recommends that the government of Ghana should step in to assist the sector in developing digital entrepreneurship and intellectual capital. The government should invest in digital infrastructure, such as reliable internet connectivity and access to technology, particularly in rural areas, to help robe all SMEs in every corner of the country into the digital realm. Additionally, the government should provide

support programmes, grants, and incentives to assist SMEs in adopting digital technologies and enhancing their digital capabilities.

As a matter of policy, the government of Ghana education ministry should make entrepreneurship education a priority, perhaps starting at secondary levels to tertiary, to equip aspiring entrepreneurs with the necessary knowledge and skills to succeed in the digital era. With digital skills at that level, SME owner-managers can easily acquaint themselves with the nitty-gritty of operating firms within the digital entrepreneurship space to enhance the overall well-being of owner-managers and firms.

Finally, the government should commit more financial and human resources to the Ghana Enterprise Agency to help them deliver their core mandate of assisting SMEs in Ghana to develop and prosper. This will help them create platforms and initiatives such as industry-specific conferences and networking events that facilitate collaboration, information sharing, data monitoring and networking among SME owners in the sector to improve the entrepreneurial ecosystem.

Suggestion for Further Studies

Although the goal of the study was successfully executed, there are some areas that would have been touched on to provide additional pointers to policy and literature. Given the novel nature of the study in the Ghanaian SME setting, a mixed-methods approach to research, where researchers employ both quantitative and qualitative techniques, could have captured the respondents' feelings and contributions to digital entrepreneurship and their personal well-being. However, due to time and financial constraints, the researcher was not able to adopt the mixed method and, hence, suggests future scholars explore the phenomenon from that perspective.

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APPENDICES**APPENDIX A: QUESTIONNAIRE****UNIVERSITY OF CAPE COAST****DEPARTMENT OF MANAGEMENT**

**DIGITAL ENTREPRENEURSHIP, INTELLECTUAL CAPITAL AND
WELL-BEING OF OWNERS/MANAGERS OF SMALL AND MEDIUM
ENTERPRISES IN GHANA**

Dear Sir/Madam

I am a Ph.D. student at the University of Cape Coast and carrying out research on the topic “Digital Entrepreneurship, Intellectual Capital and Well-being of Owners/Managers of Small and Medium Enterprises in Ghana”. The purpose of this questionnaire is to solicit data for the achievement of the study’s objectives. In this regard, kindly spend about 25 minutes of your valuable time to help complete this questionnaire. The researcher assures respondents that the research is for academic purposes only and that utmost confidentiality of any personal details is assured.

**Section A-Information
on Respondents 1.**

Role/Position in firm

Owner	[]
Manager	[]
Owner- Manager	[]

2. Gender of respondent

Male	[]
Female	[]

3. Age range of respondents

20 -29 []	30- 39	[]
40-49 []	50-59	[]
Above 60 []		

4. What is your highest education qualification achieved?

No formal education [] Basic education certificate []

Senior Secondary/Technical School certificate [] HND/Diploma []

Degree [] Postgraduate []

**Section B-Information
on business**

5. In which industry does your firm operate?

Manufacturing []

Service []

Agriculture []

E-Commerce []

Retail []

6. Number of years the firm has been incorporated?

1-5 years []

6-10 years []

11-15 years []

16-20 years []

20 years and above []

7. What is your employee size range?

Less than 5 []

5 - 29 []

30-99 []

8. What form of business do you operate?

Sole Proprietorship [] Partnership [] Company []

Joint Venture []

Section C- Digital Entrepreneurship

Please indicate your extent of agreement with the following constructs.

1-least agree; 7-Strongly Agree

S/N	Items	1	2	3	4	5	6	7
Digital Leadership (DL)								
DL1	I would say I am a digital specialist.							
DL2	When it comes to digital knowledge, I am/we are always up to date.							
DL3	I am driving the digital transformation forward proactively in my business.							
DL4	I make my employees enthusiastic about the digital transformation in the business.							
DL5	I have a clear idea of the structures and processes that are needed for the digital transformation in the business.							
DL6	I always raise awareness about the risks of the information technologies to the employees of the business.							
DL7	I embrace the role digital information plays to reduce the resistance towards innovations brought by digital technologies.							
DL8	I raise awareness about the technologies that can be used to improve the business processes to the employee.							
DL9	I share personal experiences about technological opportunities that will increase the contributions to the business.							
Digital Creativity (DC)								
<i>Please indicate the level of your firm's creativity in the following areas:</i>								
DC1	I look out to acquiring important digital technologies for the business.							
DC2	I look out to identifying new digital opportunities.							
DC3	I look out to responding to digital transformation in the business.							
DC4	The business seeks to mastering the state-of-the-art digital technologies.							
DC5	The business seeks to develop some innovative products/service/process using digital technologies.							
DC6	I constantly search for technological trends for the business.							

DC7	In the business, I can analyse the signals scouted and analyse the digital scenarios of the future.							
Digital Knowledge (DK)								
DK1	I know what to look out for when creating a digital profile for the business.							
DK2	I am aware of the different measures to take to protect my business digital profile and content.							
DK3	I obtain relevant information about my/our business when using digital technologies.							
DK4	I am aware of the risks and threats associated with the use of digital technologies for the business.							
DK5	I use digital technologies to interact with my customers in the business.							
DK6	I am aware of the different digital technologies available to create innovative solutions for the business.							
DK7	I look out for opportunities that will enhance my digital knowledge for the business' growth and development.							

Section D- Intellectual Capital

Please indicate the extent of implementation of the following innovations.

Note: 1-not at all; and 7-Very much.

S/N	Item	1	2	3	4	5	6	7
Human Capital (HC)								
HC1	In my business, the employees have suitable education to do their jobs.							
HC2	In my business, the employees hold suitable work experience for accomplishing their job successfully.							
HC3	In my business, the employees understand that doing this job well is a reward in itself							
HC4	In my business, employees feel thoroughly familiar with their tasks considering the time spent on the job.							
HC5	In my business, mastering their jobs means a lot to our employees.							
Organisational Capital (OC)								
OC1	My employees recognize the relationships among authority and responsibilities.							

OC2	My employees effectively understand the information systems in the business.							
OC3	My employees effectively utilize the information system in the business.							
OC4	My employees know well about the contents of a business's culture.							
OC5	My employees can operate an efficient business without strict supervision.							
OC6	My employees can effectively share their knowledge with each other.							
Relational Capital (RC)								
RC1	I have strong commitment with fellow employees							
RC2	I have strong ties with fellow employees							
RC3	I have no problem trusting my colleagues							
RC4	I am always willing to help my/our employees who need it.							
RC5	I can always turn to my employees for help.							
RC6	I can freely discuss my problems with my fellow employees.							
RC7	Work relationship with employees' is characterized by mutual respect at many levels							
RC8	Business relationship with fellow employees is highly reciprocal							

Section F- Well-being

The following statements describe the items for well-being. As the owner or manager in the sampled organisation, please indicate the extent to which you agree or disagree to the statement. Where 1 indicates least agreement while 7 indicates strongly agree. Please circle the number in the appropriate column.

S/N	Item	1	2	3	4	5	6	7
Financial Well-being (FW)								
FW1	The business has improved my standard of living							
FW2	I /we have achieved a lot in life because of the business							
FW3	The business has improved my financial well-being							
FW4	I am satisfied and feel safe in life because the business is doing well							
FW5	My future is secured because of the business							

Non-financial Well-being								
NWB1	I am satisfied with life in this business.							
NWB2	The state of my life is excellent.							
NWB3	So far, I have achieved important milestones in my life.							
NWB4	I have the competence to manage the business.							
NWB5	I am satisfied with multiple aspects of my life.							
NWB6	I have goals in my life that have a clear direction.							
NWB7	I create suitable connections for meeting my needs.							
NWB8	I have well-defined aims and objective in my life.							

THANK YOU

APPENDIX B: ETHICAL CLEARANCE LETTER

UNIVERSITY OF CAPE COAST

INSTITUTIONAL REVIEW BOARD SECRETARIAT

TEL: 0558093143 / 0508878309

E-MAIL: irb@ucc.edu.gh

OUR REF: IRB/C3/Vol.1/0148

YOUR REF:

OMB NO: 0990-0279

IORG #: IORG0011497

11TH MAY 2023

Ms Govina Esi Sena
Department of Management
University of Cape Coast

Dear Ms Sena,

ETHICAL CLEARANCE – ID (UCCIRB/CHLS/2022/113)

The University of Cape Coast Institutional Review Board (UCCIRB) has granted Provisional Approval for the implementation of your research on **Digital Technologies Adoption and Well-being of Owner-Managers of Small and Medium Enterprises**. This approval is valid from 11th May 2023 to 10th May 2024. You may apply for a renewal subject to the submission of all the required documents that will be prescribed by the UCCIRB.

Please note that any modification to the project must be submitted to the UCCIRB for review and approval before its implementation. You are required to submit a periodic review of the protocol to the Board and a final full review to the UCCIRB on completion of the research. The UCCIRB may observe or cause to be observed procedures and records of the research during and after implementation.

You are also required to report all serious adverse events related to this study to the UCCIRB within seven days verbally and fourteen days in writing.

Always quote the protocol identification number in all future correspondence with us in relation to this protocol.

Yours faithfully,

Kofi F. Amuquandoh
Ag. Administrator

ADMINISTRATOR
INSTITUTIONAL REVIEW BOARD
UNIVERSITY OF CAPE COAST

APPENDIX C: INTRODUCTORY LETTER

UNIVERSITY OF CAPE COAST
COLLEGE OF HUMANITIES AND LEGAL STUDIES
SCHOOL OF BUSINESS
DEPARTMENT OF MANAGEMENT

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UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref:

3rd November, 2022

Your Ref:

The Chairman
Institutional Review Board
University of Cape Coast
Cape Coast

Dear Sir/ Madam,

INTRODUCTORY LETTER – MISS SENA ESI GOVINA

The bearer of this letter, Miss Sena Esi Govina, is a PhD student at the Department of Management, School of Business, University of Cape Coast and offering Business Administration. As part of the programme requirements, she is required to undertake research on the topic: "Digital Technologies Adoption and Well-being of Owner-Managers of Small and Medium Sized Enterprises."

I would be grateful if you could assist her with the necessary assistance she may need for her research.

Thank you.

Yours faithfully,

Dr. Nicodemus Osci Owusu
Supervisor