UNIVERSITY OF CAPE COAST

ELECTRONIC COMMERCE ADOPTION AND PERFORMANCE OF

SMALL FASHION DESIGN ENTERPRISES IN KUMASI METROPOLIS,

GHANA

MATEYENU MOFERI ADAMU

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GHANA

BY

MATEYENU MOFERI ADAMU

Thesis submitted to the Centre for Entrepreneurship and Small Enterprise Development of the School of Business, College of Humanities and Legal Studies, University of Cape Coast in partial fulfilment of the requirements for the award of Master of Commerce degree in Entrepreneurship and Small Enterprise Development

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## DECLARATION

**Candidate's Declaration**

I hereby declare that this thesis is the result of my own original work and that

no part of it has been presented for another degree at this University or

elsewhere.

Candidate's Signature:………............................. Date:…………………

Name: Mateyenu Moferi Adamu

**Supervisor's Declaration**

I hereby declare that the preparation and presentation of the thesis were

supervised in accordance with the guidelines on supervision laid down by the

University of Cape Coast.

Supervisor's Signature:…………................. Date:………………..

Name: Dr. (Mrs.) Mavis Serwah Benneh Mensah

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## ABSTRACT

According to research, the small enterprise sector is characterised by the slow adoption of e-commerce, which impedes business operations, development, and efficiency. Small enterprises make up the majority of Ghana's fashion industry, which should ideally be driven by e-commerce. Nonetheless, there is a paucity of studies on the industry's acceptance and use of e-commerce. The study looked at the adoption and influence of e-commerce on the performance of Small fashion design enterprises in Kumasi Metropolis, Ghana, using the unified theory of acceptance and use of technology. A structured questionnaire was utilised to collect data from a convenience sample of 264 respondents, based on the post-positivist research paradigm. Descriptive analysis and partial least squares structural equation modelling revealed that the Small fashion design enterprisesto some extent use electronic commerce in their operations. The findings also revealed that performance expectancy, efforts expectancy, social influence and facilitating conditions are determinants of electronic commerce adoption among small enterprises.  Again, electronic commerce adoption has a significant positive influence on firm performance while firm size moderates the electronic commerce adoption and firm performance nexus. It is recommended that owners and managers of fashion small enterprises increase the adoption of e-commerce in their business operations and enact policies that will enhance the influence of the aforementioned e-commerce determinants on firm performance.

**KEY WORDS**

E-commerce

Fashion Design

Firm Performance

Small Enterprises

Firm Size

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Finally, I am grateful to all individuals, named and unnamed, who have helped in diverse ways to the successful completion of this thesis.

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**DEDICATION**

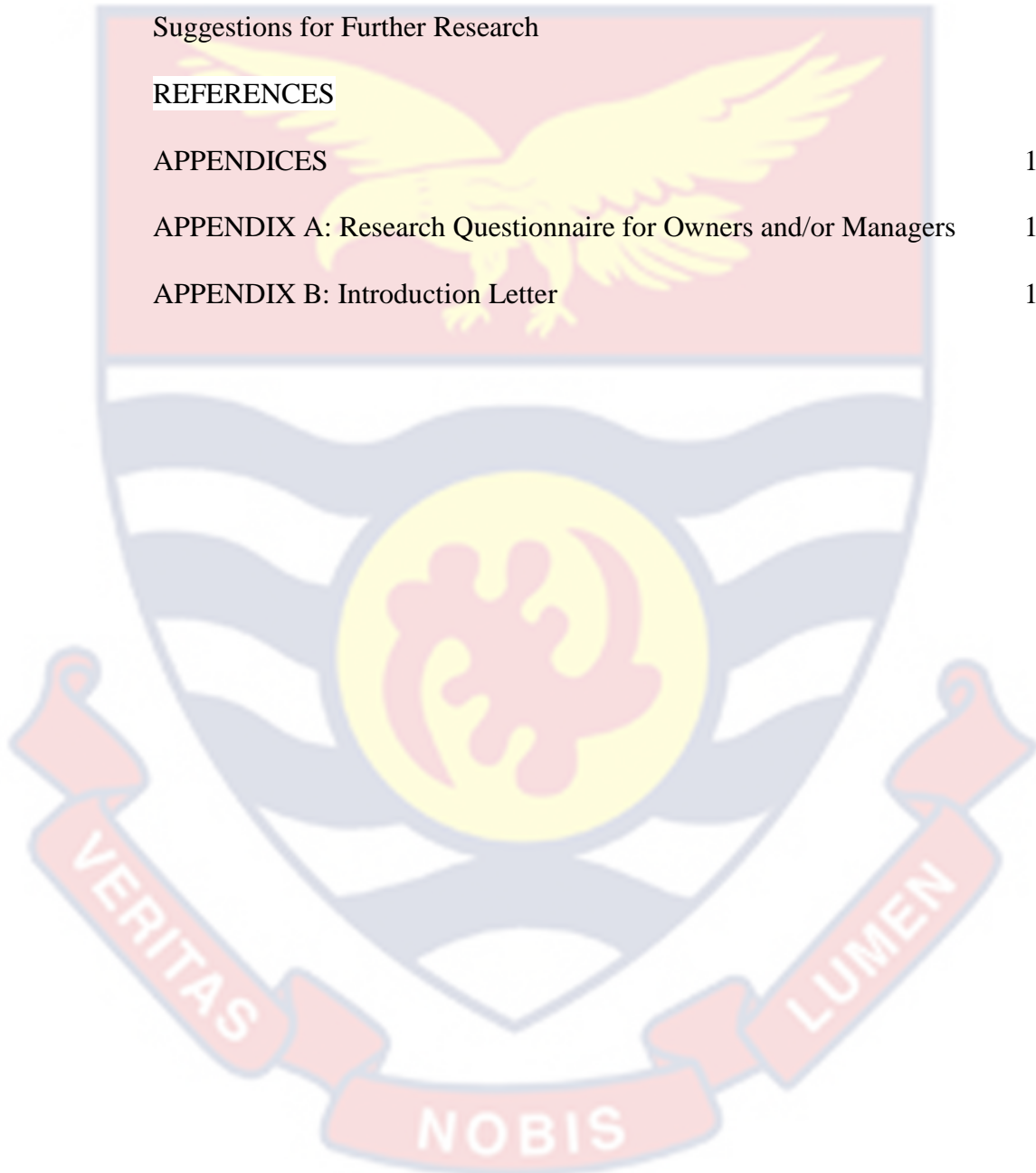To my caring and supportive brother, Mr. Solomon Moferi Adamu

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# CHAPTER ONE

# INTRODUCTION

E-commerce has been of great importance to enterprises in recent years, however, particular attention has not been paid by scholars and practitioners in developing countries such as Ghana. This study examined the e-commerce adoption and its performance in Small fashion design enterprisesin Kumasi Metropolis, Ghana. This chapter presents an overview of the research on electronic commerce adoption and performance of Small fashion design enterprises. The issues covered in this chapter comprise the background to the study, statement of the problem, objectives, significance and organisation of the study.

## Background to the Study

Fashion has been with us since the dawn of time, and fashion trend changes with each generation. Fashion is a social phenomenon of significant importance. In some ways, fashion helps depict personalities through visual representations (Back, 2020). In 2012, the global apparel market size was about $1.7 trillion, generating employment for close to 75 million people globally in its supply chains (Ma, Lee & Goerlitz, 2016).

The fashion industry has evolved greatly in the twenty-first century because of the advancement of information technology (Hall & Pfeiffer, 2013). This has made it simple to access any market in the world. Fashion designing has proved to be the important pivot point in various phases of one's professional and personal life. Dress codes, parties, business meetings, weddings and other occasions demand change in clothing. And that's the job of a designer to design the wants and needs of the audience(Tran & Smith,

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2020). According to Murzyn-Kupisz, and Hołuj (2021), the biggest opportunities that are there for the fashion industry are: Digital, Sustainability and Consumer engagement. Many designers are shifting their business motto towards sustainability.

Fashion is quickly becoming a predominantly digital industry, with big data, digital collaboration, online interaction, digital marketing, and electronic commerce (e-commerce) all being used to create and sell physical things to digital generations (Mariani & Wamba, 2020). Blazquez (2014) explains that the fashion industry used to operate in a traditional form that was limited to a single geographical place, which was tough to replicate the in-store experience online. For this reason, fashion retailers were slower to adopt e-commerce than retailers in other industries. However, the internet has altered the business environs in such a way that more and more enterprises are migrating into e-commerce channels in search of new business opportunities in a worldwide market due to significant investments in technology (Macchion et al., 2017).

Lestari (2019) defined electronic commerce as the practice of purchasing and selling goods and services over the internet. Business websites and online marketplaces are the most prevalent e-commerce platforms, although mobile commerce is becoming more popular as a supplement to e-commerce. Retailers are constantly developing and reinventing the way customers browse, shop, and buy, from physical to digital, from e-commerce to mobile commerce (Golden & Regi, 2013). Augmented reality, 3D virtual models, and 360 product views are some examples of information technology applied in the fashion business. This has led to consumers having a more interactive and enjoyable shopping experience (Blazquez, 2014). Currently,

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consumers have the same expectations for both traditional and internet transactions (Nisar & Prabhakar, 2017).

E-commerce has developed incredibly in recent years due to technological advancements and increased customer demand for convenience, and it has the potential to outperform traditional retail channels in the future (Wagner, Schramm-Klein & Steinmann, 2020). In order to meet clients demand wherever they are, irrespective of the sales channel, an increasing number of small fashion enterprises have embraced an omni-channel approach with both physical and online presence (Postnord, 2018).

E-commerce differs based on the geographic context. Trends in e-commerce differ among countries, and each nation faces different challenges because no two countries have the same level of infrastructure and human resources to facilitate the adoption of Information Technology (IT) and e-commerce on an equal basis in all areas (Yoboue, Yi & Antwi, 2018). With such trends all over the world, e-commerce is not a new phenomenon in Ghana. In Ghana, the fashion industry is growing rapidly and the potential for Ghana to be on the map both as a producer and ultimately a consumer of luxury goods is growing steadily (Langevang, 2017). According to Sohl, Vroom and McCann (2020), the number of traditional enterprises complementing their traditional store sales with online sales is increasing every year.

There are numerous theories that aid in the adoption of e-commerce and the adoption of e-commerce thrives on the theories such as the unified theory of acceptance and use of technology and the resource-based theory. The traditional view of the unified theory of acceptance and use of technology has

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four constructs which are performance expectancy, effort expectancy, social influence, and facilitating factors (Venkatesh, Thong & Xu, 2016).

The focus of the performance expectancy is on e-commerce usage and its influence. The effort expectancy factor evaluates the input of skills, while the social influence factor considers the effects of the social context on adoption, and the facilitating conditions factor considers the aids accessible when using e-commerce. The resource-based theory contends that the possession of strategic resources provides an organisation with a golden opportunity to develop competitive advantages over its rivals (Barney, 1991).

Many studies have been conducted on the issue of firm representation in e-commerce, as well as the influence of e-commerce on overall firm performance (DeFranco, Morosan, & Hua, 2017; Shemi & Procter, 2018; Li, Lin, Turel, Liu & Luo, 2020). The benefits of e-commerce are numerous, for users, enterprises, and society as a whole. According to Macchion et al. (2017), e-commerce allows traditional enterprises to increase their market share while improving the efficiency of their operations. Enterprises that use online sales channels have better overall performance and higher sales in comparison with enterprises with no online sales (Gonzalo, Harreis, Altable & Villepelet, 2020).

According to Bennett (2019), enterprises that invest in e-commerce reap the following six benefits; improved information management, improved supplier integration, improved channel partnership, lower transaction costs, improved market understanding, and expanded geographical coverage. Irfan, Wang and Akhtar (2019) reported that the fashion industry is striving to utilise the full benefits of e-commerce adoption to improve their business performances.

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Boyetey and Antwi, 2021 found that fashion has become the fastest-growing product category bought online and also has the highest e-commerce consumption among all categories within Ghana. This trend of growth is visible in almost all parts of the country and Kumasi is no different. Kumasi Metropolitan Assembly is Ghana's second largest city, which has a thriving business community, with the majority of the enterprises falling under the SMEs blanket (Acheampong, 2019).

According to available data, around 126,662 (19.8%) of Ghana's 638,234 establishments operate as SMEs, with the majority operating as micro enterprises (Awotwe, 2018). Ghana Entreprise Agency (GEA) classified SMEs as follows: Microenterprise (less than 5 employees); Small enterprise (6–29employees); Medium enterprise (30–99 employees); and large enterprise (100 and more employees). Addae-Korankye and Aryee (2021), added that SMEs account for almost 90% of all enterprises registered, of which Small fashion design enterprisesare inclusive. In relation to what has been stated, this study focuses on how e-commerce influences the performance of Small fashion design enterprisesin the Kumasi Metropolis, Ghana.

**Statement of the Problem**

Accessibility and usage of the internet are growing year in and year out and this influences its utilisation in business. In the Ghanaian setting, evidence suggests that some small enterprises have experienced low performance since most small enterprise owners and customers are not inclined to use the technological tools available to access enterprises (Tuffour, Akuffo, Kofi, Frimpong, & Sasu, 2018). Available literature indicates that the SMEs sector is particularly characterized by slow uptake of e-commerce thus hindering

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business operations, development, and efficiency (Hamidi & Ariff, 2021).

Owusu, Taana, Bakare, Abdurrahaman and Broni (2020) for instance, observe that low investment in e-commerce innovations has led to a lag in business transformation and hence the performance of small enterprises. Given this low uptake status, developing countries, particularly Ghana, have not been able to reap the full benefits derivable from investment in e-commerce. For instance, retailing using information technology has not fully been deployed in the Ghanaian fashion industry context (Ogoe & Acquaye, 2020; Jacqueline, Afi & Pinamang, 2022). The fashion enterprises in Ghana only employed e-commerce and other digital media to a limited extent in their operations (Awiagah, Kang & Lim, 2016).

Diverse studies have been conducted related to the adoption of e-commerce by small enterprises around the world, most of these studies are concentrated in relatively well-developed economies (Rana, Barnard, Baabdullah, Rees & Roderick, 2019; Thalassinos & Thalassinos, 2018; Collins & Bardle, 2018). A few studies have also been undertaken in developing countries such as Ghana, Tanzania and Nigeria (Oni & Adeyeye, 2020; Morris, 2018; Ibam, Boyinbode & Afolabi, 2018; Selyer & Mugova, 2017).

In Ghana, for instance, Batra and Arora (2020) conducted research on e-commerce adoption in small enterprises. The study emphasized the importance of business adoption of e-commerce technology. Only three independent factors (organisational culture, social influence, and technological competency) were found to be statistically significant. Organisational culture emerged as the most important factor influencing e-commerce adoption, with social influence and technological competency having a lesser influence.

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Findings from studies conducted in developed economies can not certainly apply to enterprises in developing economies because developed economies are more advanced in information technology than the developing economies. It is good that other studies have been conducted in developing countries. Howevcer, among the studies conducted in Ghana none particularly looked at small fashion enterprises. This study sought to fill these gaps by investigating the adoption of e-commerce and performance with focus on the fashion SMEs in Kumasi Metropolis, Ghana.

**Purpose of the Study**

This study sought to examine electronic commerce adoption and performance of Small fashion design enterprises in Kumasi Metropolis, Ghana through the moderating role of firm size.

**Research Objectives**

Specifically, the study sought:

1. to assess the level of e-commerce adoption among small fashion design enterprises

2. to examine the determinants of e-commerce adoption among small fashion design enterprises

3. to analyse the effects of e-commerce adoption on firm's performance in small fashion design enterprises

4. to analyse the moderating role of firm size on the relationship between e-commerce adoption and performance of small fashion design enterprises.

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**Research Questions**

To pursue the above-stated objectives, the following research questions were formulated to guide the study.

1. What is the level of e-commerce adoption among Small fashion design enterprises?

2. What are the determinants of e-commerce adoption among Small fashion design enterprises?

3. What are the effects of e-commerce adoption on firm's performance in the Small fashion design enterprises?

4. What is the moderating role of firm's size on the relationship between e-commerce adoption and firm performance in Small fashion design enterprises?

**Research Hypotheses**

The following hypotheses were formulated based on objectives two, three and four to guide the study.

**Hypothesis for objective 2**

$H_{0a}$: Performance expectancy is not a statistically significant determinant of e-commerce adoption.

$H_{1a}$: Performance expectancy is a statistically significant determinant of e-commerce adoption.

$H_{0b}$: Effort expectancy is not a statistically significant determinant of e-commerce adoption.

$H_{1b}$: Effort expectancy is a statistically significant determinant of e-commerce adoption.

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$H_{0c}$: Social influence is not a statistically significant determinant of e-commerce adoption.

$H_{1c}$: Social influence is a statistically significant determinant of e-commerce adoption.

$H_{0d}$: A facilitating condition is not a statistically significant determinant of e-commerce adoption.

$H_{1d}$: A facilitating condition is a statistically significant determinant of e-commerce adoption.

**Hypothesis for objective 3**

$H_0$: E-commerce adoption has no statistically significant influence on the performance of Small fashion design enterprises.

$H_2$: E-commerce adoption has a statistically significant influence on the performance of Small fashion design enterprises.

**Hypothesis for objective 4**

$H_0$: Firm size does not statistically moderate the nexus between e-commerce adoption and performance of Small fashion design enterprises.

$H_3$: Firm size statistically moderates the nexus between e-commerce adoption and performance of Small fashion design enterprises.

**Significance of the Study**

The findings of the study was of immense significance to several stakeholders. First, it would help small enterprtise owners in Ghana to develop strategies that promote the use of e-commerce tools and technologies within their respective companies to market their products to boost performance. That is, small enterprises' implementation of e-commerce may contribute to an increase in revenues and economic growth in developing countries such as

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Ghana. Hence, the adoption of e-commerce by small enterprise owners in Ghana might assist in attracting and retaining new customers.

Also, an understanding of the determinants of e-commerce adoption is crucial in designing policies and interventions that would help providers to deliver appropriate innovations that will attract more potential users in the fashion industry. Moreover, academicians and students alike would find the study's methodology and subsequent results rich enough to guide future research. Lastly, the study would act as an impetus to reignite interest in this critical area of research.

## Delimitation of the Study

Delimitations of research are boundaries that the researcher sets to control the range of study (Hancock & Algozzine, 2017). Firstly, the study was limited to small enterprises in the fashion industry. It did not include large-scale firms. Secondly, it was limited to firms in the Kumasi Metropolis and did not extend beyond it. The time-bound nature and limited resources available for this academic research necessitated the narrowing of the scope. Furthermore, the study focused on the e-commerce adoption and performance of small enterprises in the fashion design industry.

## Limitations of the Study

One would have thought that a study of this nature should have been conducted across the entire country. However, the study concentrated the investigation on the Kumasi Metropolis in Ghana. This is considered a shortcoming of this study. Thus, this predicament should be considered in the generalisation of the study's result. Another shortcoming of this study was the limiting of the respondents to only owners, managers or owner-managers of

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the enterprises.

**Definition of Key Terms**

**E-commerce**: E-commerce refers to the use of networked information and communication technologies (ICT), especially internet technology, in any business activities (Rahayu & Day 2017).

**Fashion Design**: Fashion design is the art of creating clothing and accessories (Fanglan & Kaifa, 2021)

**Firm Performance**: SMEs' performance refers to the outcomes of firms' business activities (Ainin, Parveen, Moghavvemi, Jaafar & Mohd Shuib, 2015).

**Small Enterprise**: Small enterprise is the enterprise with a cut off employment of 30 employees (Ogechukwu, 2011).

**Firm Size:** Firm size is defined by the number of employees in the organisation, Abor and Quartey (2010) classified small enterprises into three categories. These are micro - employing less than 6 people; very small - employing 6-9 people; small - between 10 and 29 employees.

**Organisation of the Study**

The overall structure of the study takes the form of five chapters, including this introductory chapter. Chapter two presented the comprehensive theoretical background of various approaches and theories developed and used by earlier researchers followed by an extensive review of literature beginning with the concept of e-commerce and small entyerprise performance and followed by a discussion on empirical studies on the topic. Chapter three dealt with research methods adopted to execute the study. Chapter four presented detailed results of data analysis as per research methods with a brief

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description of tabulated information followed up on the results and presented a detailed discussion of these results summarizing the empirical findings of the study. The final Chapter (chapter five) provided the summary drawn from the results of the analyses followed by a conclusion on the implications of the study with recommendations as well as some suggestions for the direction of further research.

**Chapter Summary**

This Chapter captured an introduction, background and the statement of the problem detailing the gaps in knowledge about the study's constructs, which necessitated the conduct of this study. Moreover, the justification of the study was also covered in this Chapter as well as the research objectives and questions. The next Chapter covers the review of literature on e-commerce adoption and firm performance.
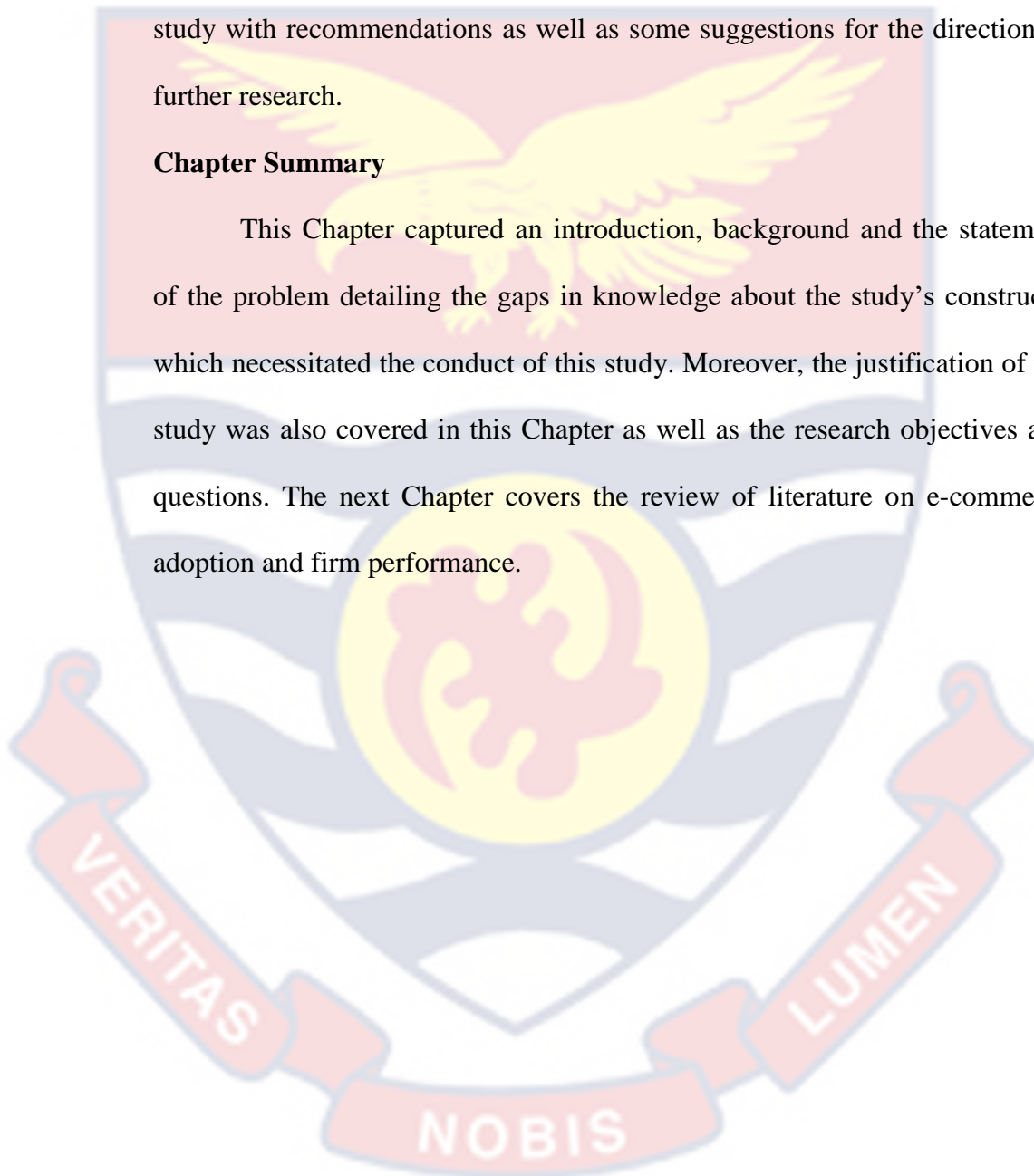
# CHAPTER TWO

# LITERATURE REVIEW

**Introduction**

A literature review is a comprehensive summary of previous research on a particular subject (Denney & Tewksbury, 2013). The overview demonstrates what is known about the topic as well as what is unknown, establishing the rationale and the need for additional research, which is what the literature review intends to achieve. A review of the literature in the study area helped identify areas of agreement and disagreement, thereby avoiding previous errors made by previous scholars.

Also, the literature review provided theorecal, conceptual, and empirical foundations for the study, as well as clarification on key concepts, ideas, and related models of the topic under investigation. Finally, the review was useful in the methodology, analyses, findings presentation, discussions, conclusions, and recommendations. The Chapter began with a discussion of the relevant theories that underpin the study and how it has been adopted in the existing literature in the field. The Chapter also discussed the key concepts comprising e-commerce, small enterprises and small enterprise performance. In addition, it covered an empirical review of studies done on the variables whiles presenting the direction of the study on the pictorial conceptual framework to aid readability and understanding.

**Theoretical Review**

This study was anchored on two theories, which are Unified Theory of Acceptance and Use of Technology (UTAUT) and the Resource-Based Theory. These theories have been used by some schoolars in explaining the

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adoption of e-commerce (Perrigot & Pénard, 2013; Thomas, Singh & Gaffar, 2013).

**Unified Theory of Acceptance and Use of Technology**

The Unified Theory of Acceptance and Use of Technology (UTAUT) was propounded by Venkatesh et al. (2003). Various theories had been established to study the behavioural intentions to adopt technologies. Such models include the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), the Theory of Planned Behaviour (TPB) (Ajzen, 1991), the Technology Acceptance Model (TAM) (Davis, 1989), the Combined -TAM-TPB model (C-TAM-TPB) (Taylor & Todd, 1995), the Motivational Model (MM) (Davis et al., 1992), the Innovation Diffusion Theory (IDT) (Rogers, 1995), Model of PC Utilization (MPCU) (Thompson et al., 1991), Social Cognitive Theory (SCT) (Bandura, 1988).

Venkatesh et al. (2003) combined these 8 theories to form the Unified Theory of Adoption and Use of Technology (UTAUT) to study the behavioural intention to use technology. This theory consists of four core determinants of intention and usage: Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions and also of four moderators of key relationships: Gender, Age, Experience and Voluntariness.

UTAUT is defined by Venkatesh et al. (2003) as a useful tool for managers who need to assess the likelihood of success for new technology introductions. UTAUT is also used to better understand the factors that influence acceptance to proactively design interventions for user populations that are less likely to adopt and use new systems. The UTAUT has advanced individual acceptance research by unifying the theoretical perspectives

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common in the literature and incorporating four moderators to account for dynamic influences including organisational context, user experience, and demographic characteristics (Venkatesh et al., 2003).

Alsharif (2013) observed that UTAUT might be useful as a tool in providing insight into cross-cultural technology acceptance differences. While reviewing the UTAUT, Williams, Rana and Dwivedi (2015), noted that UTAUT has been considered the most prominent and unified theory in the stream of information technology adoption research, with high robustness of the instruments regarding the key constructs.

In comparison to other technology acceptance and use theories, Dulle and Minishi-Majanja (2011) agree that UTAUT is comprehensive and has high explanatory power. UTAUT explains user intentions to use technology as well as subsequent usage behaviour. The theory also holds that the four key constructs, performance expectancy; effort expectancy; social influence; and facilitating conditions, are direct determinants of usage intention and behaviour. Gender, age, experience, and voluntariness of use are to mediate the influence of the four key constructs on usage intention and behaviour (Venkatesh et al., 2003)

In explaining the four core constructs of UTAUT, Venkatesh et al (2003), noted that performance expectancy could be defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance. This construct was, according to them, derived from five different constructs and models of perceived usefulness (TAM/TAM2 and C-TAM-TPB), extrinsic motivation (MM), job-fit (MPCU), relative advantage (IDT), and outcome expectations (SCT). Furthermore,

Venkatesh et al. (2003) define effort expectancy as the degree of ease associated with the use of the system. This concept was derived from the three constructs and models of perceived ease of use (TAM/TAM2), complexity (MPCU), and ease of use (IDT).

The third construct, used in explaining UTAUT, is the social influence. Venkatesh et al. (2003) define this construct as the degree to which an individual perceives that important others believe he or she should use the new system. Social influence in UTAUT is explained as a subjective norm in TRA, TAM2, TPB/DTPB and C-TAM-TPB, social factors in MPCU, and image in IDT. Finally, the last construct in UTAUT is the facilitating conditions, defined as the degree to which an individual believes that an organisational and technical infrastructure exists to support the use of the system. Facilitating conditions are represented as perceived behavioural control (TPB/ DTPB, C-TAM-TPB), facilitating conditions (MPCU), and compatibility (IDT).

UTAUT is being widely used to study the factors that influence technology adoption by firms. In South Africa, Ndayizigamiye (2012) investigated 180 SMEs and concluded that performance expectancy, effort expectancy and social influence of the UTAUT Model are the determinants of their e-commerce adoption. Another study was conducted in Nigeria amongst 150 e-commerce customers across different industries and it was found that performance expectancy, effort expectancy and facilitating conditions have a significant relationship with behavioural intention to adopt e-commerce (Ghalandari, 2012).

Given that UTAUT is used to illustrate behavioural intentions to adopting new technology, it is of good impression to apply it to the present

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study. Concisely, when owners and managers of small business fashion designs consciously make efforts to adopt technology to their enterprises, performance of their firms could be improved.

**Resource-Based Theory**

Barney (1991) developed Resource-Based Theory (RBT). The Resource-Based Theory contends that the possession of strategic resources provides an organisation with a golden opportunity to develop competitive advantages over its rivals (Barney, 1991).  According to Rivard, Raymond and Verreault (2006), the original piece of work on RBT was found in Penrose (1959), who described the business as a "bundle of resources". In this theory, business can achieve a sustainable competitive advantage by utilizing and exploiting the various resources from internal or external resource bundles (Donnellan & Rutledge, 2019; Ying, Hassan & Ahmad, 2019).

Mahdi and Nassar (2021) explain that strategic resources consist of assets, capabilities, processes, attributes, knowledge and the know-how that are possessed by a business, and that can be used to develop and enact competitive strategies. The RBV contends that "resources" are the fundamental assets that organisations possessed and, therefore, organisations' success depends on them (Madhani, 2012). RBT further explained that the fundamental factor in the determination of competitive advantage and organisational performance is premised on the nature of the firm's resources.

A central premise of the theory is that a firm's competitive position and performance are influenced by the kind of resources and capabilities it possesses (Pisano, 2015). This indicates that it is not all resources and capabilities in a firm's possession that can offer it a competitive advantage,

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but rather how "valuable", "rare", "inimitable" and "non-substitutable" the resource is that makes the difference (Lonial & Carter, 2015).

Agbegblewu and Boohene (2016) establishes that the resources of business establishments can be categorised into two: tangible and intangible. In the view of Kaufmann and Roesch (2012), eventhough firms can derive their competitive edge in the marketplace through effective deployment of their resources, the sustainability of the competitive advantage can only be accomplished through the deployment of intangible assets due to their unique characteristics.

Lonial and Carter (2015) supported the claims above by asserting that firms' possession of intangible assets such as business orientation is a source of sustained competitive advantage to organisations. The authors further advanced that possession of tangible resources only helps organisations to acquire long-term competitive advantage. The reason is that tangible resources are not unique to an organisation and, hence, made them easy to duplicate. Eniola and Ektebang, (2014) also advanced that intangible resources of an organisation are mostly exclusive to organisations and, hence, provide continued competitive advantage to them. Concerning this, Micheli and Manzoni (2010) averred that the resources of an organisation are indeed key drivers of an organisation's performance.

The viewpoint of RBT is that resources capable of being "valuable", "rare", "imperfectly imitable" and "imperfectly sustainable" are a source of competitive advantage only work in the unchanging business atmosphere (Njuguna, Kwasira & Orwa, 2018). The theorists further argue that the model fails to address, specifically, how valuable resources could be developed in the

future and how the characteristics of resources, as touted by the model as a source of competitive advantage, can be refreshed in a changing environment. Also, D'Aveni, Dagnino and Smith (2010). asserted that even if the firm's resources meet the unique characteristics, as proclaimed by the RBV, the competitive advantage would decline over time, mainly in an extremely unpredictable business atmosphere.

The RBV has also been criticized because of its static nature. As a result, Gilpin, Bau, Yuan, Bajwa, Specter and Kagal (2018) opined that a more dynamic approach should be employed in order to achieve a greater explanatory capacity. Despite criticisms regarding the RBV's failure to identify which resource(s) account(s) the most for a firm's success (Iakovleva, 2004), the theory has contributed immensely to knowledge on the application of resources, the sustainability of competitive edge, the kind of economic rents and the origin of heterogeneity (Agbeblewu & Boohene, 2016). It has further heightened knowledge regarding the kind, features and how resources could be used in a distinctive way (Irava & Moores, 2010).

The globalisation of the economy is forcing many enterprises to change in order to survive and as such, e-commerce has provided the means in order for enterprises to reach the wider market. The resource-based theory has had some contribution to the e-commerce literature. In e-commence literature, this theory is mainly used to explain the contribution of IT to business value. For example, Zhu, Zhao and Bush (2020), applied this theory in order to explain the link relationship between e-business use and business value. Also, Samad (2013) used this theory to explain the contribution of IT to business performance.

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Similarly, in this study, the Resource-based Theory is used to link e-commerce use and SMEs performance. Within the principles of the RBT, business stand to reap the benefits of competitive resources like technology when applied to work. The RBT prompts the fashion design business owners on how to deploy technology as a strategic resource to improve performance of their enterprises. Hence, the theory is relevant and addresses the shortcomings of the UTAUT because whiles UTAUT does not point to how competitive adavantage could be obtained, the RBT does. To this end, the study argue that fashion design business owners who deploy strategically technology would foster business prosperity.

**Review of Key Concepts**

Under this section, the key concepts that were reviewed are electronic commerce, determinants of e-commerce adoption, small enterprise and small enterprise performance.

**Electronic Commerce**

The globalisation of the economy is causing many enterprises to change in order to survive and as such, electronic commerce has served as a means through which enterprises reach the wider market (Kotabe & Helsen, 2020). There is no single definition of e-commerce with various definitions being offered by several authors. Turban, Bolloju and Liang (2010) defined e-commerce as ''the process of buying, selling, transferring, or exchanging products, services, and/or information via computer networks, mostly internet and intranets''.

Moreover, Sukhodolov, Popkova, Kuzlaeva, Sukhodolov, Popkova, and Kuzlaeva (2018), argued that any economic activity conducted via the

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internet can be called e-commerce. In more detail, Otoo, Zhiwen, Otoo and Antwi (2018) elaborated on the detailed elements of e-commerce as ''support services for trading, encompassing inter-organisational email, directories, trading support systems for commodities, products, customized goods and services, management information, and statistical reporting systems''.

Even though the definitions vary in exact detail, it can be seen from the definitions above that the use of ICT, particularly internet technology, is a main component of e-commerce. Hence, in this study, the definition of e-commerce refers to the use of networked information and communication technologies (ICT), especially Internet technology, in any business activities. Today, many people use the term e-commerce in a broader sense, encompassing not only the buying and selling but also the delivering of information, providing customer service before and after the sale, collaborating with business partners, and enhancing productivity within organisations (Bucur-Teodorescu, 2021).

Although many enterprises have access to e-commerce, small enterprises in developing countries, including Ghana, experience slow growth in the adoption of e-commerce attributed to a lack of awareness of e-commerce applications (Agwu & Murray, 2015). Small enterprise owners can use e-commerce to market products for improved business performance and profitability (Farida, Naryoso & Yuniawan, 2017).

All aspects of life are experiencing rapid changes in the current era of globalisation, and this is marked by technological advances. E-commerce, for instance, has revolutionized and changed traditional commerce and transcends the boundaries of time and space. Through the adoption of e-

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commerce, small enterprises can expand their market without difficulty in terms of financial and organisational resources (Savrul, Incekara & Sener, 2014). It is also one of the scientific achievements in the 20th century that influences business and people's lifestyles (Dewanti & Indrajit, 2018). E-commerce is also essential for SMEs because it can provide sales flexibility. E-commerce allows faster delivery to customers without having to come face to face with the buyer. Budiarto, Vivianti and Diansari (2021) believe that e-commerce offers real-time information and facilitates transactions for small enterprises.

E-commerce differs based on the geographic context. Trends in e-commerce differ among countries, and each nation faces different challenges because no two countries have the same level of infrastructure and human resources to facilitate the adoption of IT and e-commerce on an equal basis in all areas (Yoboue, Yi & Antwi, 2018). Because competitiveness has risen as a form of technology application via e-commerce, small enterprise owners are now able to market products and services to a broader spectrum of consumers across geographical limits (Sawmy & Damar-Ladkoo, 2015). Thus, the more reasons small enterprise owners should adopt e-commerce to market products.

The availability of infrastructure is essential in the effective adoption of e-commerce to market products. The current e-commerce trend in developing countries demonstrates that companies and governments make efforts to improve their relationships with customers and trading partners for convenience and organisational performance (Agwu & Carter, 2014). By determining the existence and needed level of appropriate infrastructure on technological, physical, financial, and institutional levels, business leaders in

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developing countries such as Ghana can manipulate e-commerce successfully (Alyoubi, 2015).

While exploring e-commerce classifications, an overview of e-commerce in Ghana, a developing country may give a deeper understanding of the phenomenon. There are many classifications of e-commerce. The most significant categories of e-commerce include transactions between enterprises, transactions between enterprises and their customers, transactions between customers, and transactions between the government and corporations (Shahriari & Mohammadreza, 2015). Each of the distinct e-commerce classifications involves a specific interaction between buyers and sellers, all of which have a potential role to play in encouraging new kinds of international trade for products and services transactions in the future (Ghandour, 2015).

Consumer-to-consumer is a form of e-commerce transaction that involves a customer conducting business with another customer through a third party (Ghandour, 2015). This e-commerce business model eliminates the need for an intermediary in the business process and covers online marketplace platforms and sales within online communities, consumer blogs, and chat rooms (Canton, 2021).

In addition, the business-to-business model is another form of e-commerce transaction in that individual consumers experience the convenience of purchasing a company's products or services online through the business's website (Mangiaracina, Marchet, Perotti & Tumino, 2015). In the model, the company holds its entire inventory on-site and allows the consumer to select items, order them, and wait for the direct shipment to the customers' desired location (Mangiaracina et al., 2015).

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Business-to-customer refers to a situation where one business makes a commercial transaction with another (Yu, Wang, Zhong & Huang, 2017). The conduct of business using this type of commerce is not only to maximize revenue and value by selling and buying products and services but also to build long-term business relationships with other companies (Yu et al., 2017). Both parties are large business entities, and the initial phases of this model involve wholesalers and manufacturers (Tu, Lim & Yang, 2018).

Business-to-Business-to-customer combines business-to-business and business-to-customer strategies (Nalweya, 2018). In this case, an individual consumer (end-user) receives a service or a product from a company that also received the product or service from another company, but without the addition of extra value. The two companies engage in a business partnership in which they enjoy mutual benefits and an expanded customer base as end-users access the products and services (van, 2018). The model can be complex and challenging to manage.

Also, consumer-to-business is the type of e-commerce transaction in that it allows individual customers to use their preferred online platforms to sell services and products to companies. This model is the most recent e-commerce business model for selling products and providing services to companies (Thirumalai & Senthilkumar, 2017). Thirumalai and Senthilkumar (2017) believe that using this approach, an individual makes a product or service offer to companies through an online post, allowing the companies to make purchases according to suitability and need.

Ghanaians have striven to use ICT as a key developmental enabler for bridging the digital divide between them and their trading partners in

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developed economies. These efforts include the Ghana ICT for Accelerated Development (ICT4AD) policy and the liberalization of the ICT sector, designed to facilitate ICT infrastructural developments and human resource capacity building. The ICT4AD policy also intended to provide an enabling platform for safeguarding the development of the ICT industry and fostering e-commerce and Internet usage in Ghana (Agbesi & Okai, 2016).

Given the significance of small enterprtises to the Ghanaian economy, the adoption of the Internet and e-commerce remains a key competitive tool for allowing SMEs to survive and gain competitive advantages over rivals (Awiagah, Kang & Lim, 2016). Consequently, understanding the drivers influencing e-commerce adoption will allow SMEs to find ways of attracting consumers to their products and services, thus enhancing their global market presence (Ghobakhloo et al., 2011).

In 2011, Ghana had an estimated 2,085,501 internet users, a major increase over the estimated 3000 Internet users in 2000 (Awiagah, Kang & Lim, 2016). This estimate corroborates Abbey (2011), who indicated that over 2 million Ghanaians have access to the Internet. Estimates suggest that Ghana's Internet users per 100 inhabitants1 are steadily increasing. Ghana is thus a congenial environment for e-commerce development and adoption (Awiagah, Kang & Lim, 2016).

**Determinants of E-commerce Adoption**

This study explored four constructs as the determinants of e-commerce adoption among SMEs. The first is **performance expectancy**. Performance expectancy is defined as the "degree to which an individual believes that using e-commerce will help him or her attain gains in job performance" (Venkatesh

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et al. 2003). It is the system provided by the enterprise aimed to help the employee to improve his performance (Bocconcelli, et al., 2016). An effective performance expectancy system in small enterprises helps the employee to build their skills by making use of platforms provided by the enterprise. According to the study of Dwivedi, Rana, Chen, and Williams (2011) performance expectancy system depends on five variables, which include perceived usefulness, external motivation, relative advantages, job fit, and outcome expectations (Bocconceli et al., 2016).

Secondly, **Effort expectanc**y is defined as the degree of ease associated with the use of e-commerce. This determinant refers to the perceived amount of effort that the user needs to put to learn and operate e-commerce. Effort expectancy has been adopted from the UTAUT model (Venkatesh et al., 2003. Social influence as a determinant of e-commerce is defined as the degree to which an individual perceives that important others (such as bosses, peers, subordinate, etc.) believe that he or she should use ecommerce.

**Social influence** is another determinant which is defined as a degree to which an employee should believe that he should make use of new system developed by the company (Bocconcelli et al., 2016). Therefore, social influence depends on the assessment of the behaviors towards the use of technology or technique (Harindranath et al., 2008). Dwivendi et al. (2011) argue that this theory depends on three concepts in SMEs, which include subjective norms, image, and social factors. Each of the identified factors contributes to the social environment in the workplace, and the behaviors used by the people. Therefore, social factors should be adequate in the SMEs,

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because they help the company to achieve success by providing collaborative platforms to workers

Lastly, **Facilitating condition**. According to Thomas, Singh and Gaffar (2013), facilitating condition is described as an extent to which the support of technological and organizational infrastructure is necessary for supporting the system based on technology. The facilitating condition has the tendency to positively influence the behaviour of employees and has great significance for understanding the acceptance and adoption of recent technologies within small enterprises.

## Small Enterprises

There is growing recognition of the important role small enterprises play in economic development. They are often described as efficient and prolific job creators, the seeds of big enterprises and the fuel of national economic engines. Small and medium sized enterprises represent over 90% of private business and contribute to more than 50% of employment and GDP in most African countries (Zafar & Mustafa, 2017). Small enterprises in Ghana are said to be a characteristic feature of the production landscape and have been noted to provide about 85% of manufacturing employment in Ghana (Tee, Boadi & Opoku, 2016). Small businesses are also believed to contribute about 70% to Ghana's GDP and account for about 92% of enterprises in Ghana.

The issue of what constitutes a small or medium enterprise is a major concern in the literature. The heterogeneity of small and  definition is on the increase because various countries have failed to converge at one point as to what the concept means. A review of the literature shows that scholars in the

extant literature have variously defined small busineses (Abor & Quartey, 2010; Berisha & Shiroka-Pula, 2015). This is because of the differences in opinion by researchers as to what the concept means.

The lack of consensus among writers on the definitions of small business is not surprising, because scholars often differ in opinion on concepts that have many components (Abor & Quartey, 2010; Berisha, & Shiroka, 2015). In defining small enterprise, components such as the size of a firm, legal status, the number of employees and turnover are often used by theorists to advance their claim. An attempt to define small business was first advanced by the Bolton Committee in 1971 (Abor & Quartey, 2010). The Committee's definition of small enterprises was based on the sector in which the small establishments find themselves. The Committee averred that for an establishment in the manufacturing sector to qualify as a small business, it must have employees equal to or less than 200.

Also, the Committee posits that firms in the trading sector should have a monetary turnover of fifty to two hundred British Pounds to qualify as small enterprises. Concerning firms in the transport sector, the Committee postulates that they need to have vehicles equal to or less than five to qualify as small enterprises. These varied definitions of small enterprises given by the Committee led to criticism of the Committee's work (Abor & Quartey, 2010). This is because there are inconsistencies concerning the characteristics used in defining small enterprises.

The European Commission (EC) defined small enterprise largely in terms of the number of employees as follows: firms with 0 to 9 employees as micro-enterprises; 10 to 99 employees as small enterprises; 100 to 499

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employees as medium enterprises. Thus, the SME sector is comprised of enterprises that employ less than 500 workers. In effect, the European Commission definitions are based solely on employment rather than a multiplicity of criteria. Secondly, the use of 100 employees as the small firm's upper limit is more appropriate, given the increase in productivity over the last two decades (Storey, 2016)

Finally, the European Commission definition did not assume the SME group is homogenous; that is, the definition makes a distinction between micro, small, and medium-sized enterprises. However, the EC definition is too all-embracing to be applied to other countries. Researchers would have to use definitions for small firms, which are more appropriate to their particular "target" group (an operational definition). It must be emphasized that debates on definitions turn out to be sterile unless size is a factor that influences performance.

Weston and Copeland (1998) hold that definitions of the size of enterprises suffer from a lack of universal applicability. In their view, this is because enterprises may be conceived of in varying terms. Size has been defined in different contexts, in terms of the number of employees, annual turnover, the industry of enterprise, ownership of enterprise, and value of fixed assets. Van der Wijst (1989) considers small and medium enterprises as privately held firms with 1 – 9 and 10 – 99 people employed, respectively. Jordan et al (1998) define SMEs as firms with fewer than 100 employees and less than €15 million in turnover.

Hall, Hutchinson and Michaelas (2004) consider small independent private limited companies with fewer than 200 employees and López and

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Aybar (2000) considered companies with sales below €15 million as small. According to the British Department of Trade and Industry, the best description of a small firm remains that used by the Bolton Committee in its 1971 Report on Small Firms. This stated that a small firm is an independent business, managed by its owner or part owners and having a small market share (Treasury, (2001).

The United Nations Industrial Development Organisation (UNIDO) also defines SMEs in terms of the number of employees by giving different classifications for industrialized and developing countries (Elaian, 1996). For industrialized countries, enterprises with 500 or more workers are classified as large; enterprises with 100 - 499 workers are classified as medium; enterprises with 99 or less workers are considered small. For developing countries enterprises with 100 or more workers are considered as large; enterprises with 20 - 99 workers are classified as Medium; enterprises with 5-19 workers are classified as small, and enterprises with less than 5 workers are classified as micro. It is clear from the various definitions that there is not a general consensus over what constitutes a small enterprise.

Definitions vary across industries and also across countries. It is important now to examine definitions of small enterprise given in the context of Ghana. There have been various definitions given for small enterprises in Ghana but the most commonly used criterion is the number of employees of the enterprise (Kayanula & Quartey, 2000). In applying this definition, confusion often arises in respect of the arbitrariness and cut off points used by the various official sources.

In its Industrial Statistics, the Ghana Statistical Service (GSS) considers firms with fewer than 10 employees as small enterprises and their counterparts with more than 10 employees as medium and large-sized enterprises. Ironically, the GSS in its national accounts considered companies with up to 9 employees as SMEs (Kayanula & Quartey, 2000). The value of fixed assets in the firm has also been used as an alternative criterion for defining SMEs. However, the National Board for Small Scale Industries (NBSSI) in Ghana applies both the "fixed asset and number of employees" criteria. It defines a small enterprise as a firm with not more than 9 workers and has plant and machinery (excluding land, buildings and vehicles) not exceeding 10 million Ghanaian cedis.

The Ghana Enterprise Development Commission (GEDC), on the other hand, uses a 10 million Ghanaian cedis upper limit definition for plant and machinery. It is important to caution that the process of valuing fixed assets poses a problem. Secondly, the continuous depreciation of the local currency against major trading currencies often makes such definitions outdated (Kayanula & Quartey, 2000).

In defining small enterprises in Ghana, Steel and Webster (1991), and Ogechukwu, (2011) used an employment cut-off point of 30 employees. Abor and Quartey (2010), however, classified small enterprises into three categories. These are micro - employing less than 6 people; very small - employing 6-9 people; small - between 10 and 29 employees. There are many definitions to SMEs. However this study relied on the defition given by Ogechukwu, (2011) that small enterprise has a cut off employment of 30 employees.

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**Small Enterprise Performance**

The performance of a firm shows the relative importance of a firm compared to its competitors. Though there are several performance definitions given in the extant literature, researchers are yet to converge at one point as to what is meant by performance. This is often expected when dealing with concepts, which are broad and have unstable meanings, because of the different perspectives and needs of users (Avci, Madanoglu & Okumus, 2011; Masa'deh, Obeidat, Zyod & Gharaibeh, 2015).

Theoretically, the definition of small enterprise performance is hinged on the economic view of profit maximization of the organisation and the stakeholders' view of satisfying the need of a group or individuals who are affected by the activities of the same organisation (Aifuwa, 2020). Leaning, on this exposition, the make-up of small enterprise performance is financial and non-financial performances (strategic or operational performance).

Firm performance means a lot to every enterprise. Superior financial performance is a way to satisfy investors (Saeidi, Saeidi, Gutierrez, Streimikiene, Alrasheedi, Saeidi & Mardani, 2021) and can be represented by profitability, growth and market value (Alpi, 2021; Fajaria & Isnalita, 2018). These three aspects complement each other. Profitability measures a firm's past ability to generate returns (Ozili & Uadiale, 2017). The growth demonstrates a firm's past ability to increase its size (Blal, Singal, & Templin, 2018). Increasing size, even at the same profitability level, will increase its absolute profit and cash generation. A larger size also can bring economies of scale and market power, leading to enhanced future profitability (Blal., *et al* 2018).

Market value represents the external assessment and expectation of firms' future performance. It should have a correlation with historical profitability and growth levels, nevertheless, it should also incorporate future expectations of market changes and competitive moves (Sadiku-Dushi, Dana, & Ramadani, 2019). Customer and employee satisfaction are two further aspects of performance. Customers want companies to provide them with goods and services that match their expectations (Hole, Pawar & Khedkar, 2019). To do that, enterprises must understand their needs, avoid defects and improve the perceived quality and value added by their offerings. (Conboy, Mikalef, Dennehy & Krogstie, 2020).

Customer satisfaction increases the willingness-to-pay and thus the value created by a company (Conboy., *et al* 2020). Employees' satisfaction is related to investments in human resources practices (Madanat & Khasawneh, 2018). This group tends to value clearly defined job descriptions, investment in training, career plans and good bonus policies (Antony, 2018). The satisfaction of these stakeholders, according to Boutmaghzoute and Moustaghfir (2021), translates itself into a firm's ability to attract and retain employees and lower turnover rates.

Indirect stakeholders, like governments and communities, are affected by a number of firms' actions, especially social and environmental ones (Civera & Freeman, 2019). Social and environmental performance can be considered a way to satisfy communities and governments (Zhu, Zou & Zhang, 2019). Some activities associated with the satisfaction of these groups are safe environmental practices, increased product quality and safety, minority employment and the development of social projects (Ssebunya et al.,

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2019; Kalkanci, Rahmani & Toktay, 2019; García-Peñalvo, 2019). This study measures both the financial and non-financial performance of small enterprises in the fashion industry in Kumasi Metropolis.

**Empirical Review**

The empirical review was developed in line with the study's specific objectives.  The review consists of the level of e-commerce adoption, determinants of e-commerce adoption, the influence of e-commerce on performance and the moderation effects of firm size on performance.

**The Level of E-Commerce Adoption**

The advancement of technology has led to the need for advanced means of reaching customers in other to have a higher share of the market. The fashion industry is no different. Fashion context is deemed to be particularly revealing when studying social media usage, as fashion itself is known to spread through the network effect. The under listed reviews shed light on the level of e-commerce adoption among SMEs in previous studies (Rahayu & Day, 2017; Mutua, Oteyo & Njeru, 2013; Migiro, 2006).

Rahayu and Day (2017) conducted a study on e-commerce adoption by SMEs. The study aimed to provide an overview of e-commerce adoption by SMEs in developing countries and, in particular, the extent of the adoption of e-commerce by Indonesian small enterprises. The study identified the e-commerce benefits realized by these small enterprises and investigated the relationship between the levels of e-commerce adoption and the benefits thus realized. The study surveyed 292 small enterprises and showed that the majority of them are still at an early stage in their adoption of e-commerce. The study also revealed that small enterprises at the higher level of e-

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commerce adoption experience greater e-commerce benefits than those at other levels of adoption.

Nonetheless, Mutua, Oteyo and Njeru (2013) determined the extent of e-commerce adoption in small enterprises in Nairobi, Kenya. The target population for the study was small and medium-sized enterprises with official premises within the eight (8) divisions in Nairobi County. The study was a descriptive survey; a sample size of 176 firms was used. Out of the 176 small and medium-sized enterprises targeted, 163 firms responded translating to a 93% response rate.

The study was successful in determining the extent of e-commerce adoption in small enterprises in Nairobi, Kenya. While e-commerce was found to provide strategic value to adopters, it was noted that a good number of SMEs in Nairobi had not embraced the technology. It was established that e-commerce is not widespread. 43% of all the firms surveyed had no functioning websites. 31% of the firms had static websites, while 22% of the firms had active websites that allowed interactive communication with customers. The study findings also indicate that over 80% of all firms surveyed did not have a specific e-commerce strategy.

Similarly, Migiro (2006) conducted a study on the diffusion of ICTs and e-commerce adoption in manufacturing small enterprises in Kenya. The objectives of the study were to map ICT diffusion and adoption of e-commerce by manufacturing small and medium enterprises in Kenya and identify specific barriers to the exploitation of these drivers. The investigation adopted a descriptive survey research design in which random sampling techniques were used. The data was analysed using descriptive statistics.

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Results reveal that high cost, limited funds and lack of technical know-how are barriers to the diffusion of ICTs among manufacturing small and medium enterprises.

Furthermore, Govinnage and Sachitra (2019) in their study, investigated the crucial factors affecting the adoption of e-commerce by using the evidence of the retail sector in Sri Lanka as a developing nation. The targeted population for the study was the retail sector registered as Small and medium-sized enterprises in Colombo District. Adopting a stratified simple random sampling technique, the study selected 200 small enterprises in Colombo District who are engaged in the retail sector. A structured questionnaire was used to collect data. Five dimensions namely adoption of e-commerce, perceived benefits, computer literacy, government support and technology infrastructure were measured by using Likert scale measurement items. The results revealed that computer literacy, government support and technology infrastructure had a significant influence on the e-commerce adoption of small enterprises in Sri Lanka even though perceived benefits had less influence on e-commerce adoption.

Goswami and Dutta (2016) conducted a study aimed to investigate the extent of adoption of e-commerce applications by women owned SMEs in India, with a special focus on behavioural factors that influence them to do so. The Unified Theory of Acceptance and Use of Technology (UTAUT) model was utilized. Using a structured questionnaire, responses were solicited via a field survey amongst 144 women entrepreneurs in two districts of Kolkata and 24 Parganas (South) in the State of West Bengal, India. The results showed that three constructs, namely, performance expectancy, effort expectancy and

social influence significantly affect the behavioural intention of these women entrepreneurs to use e-commerce.

**Determinants of E-Commerce Adoption**

Mizal and Wijayangka (2020) conducted a quantitative study aimed at determining the factors of technology adoption that influence small enterprises in adopting e-commerce. Unified Theory of Acceptance and Use of Technology (UTAUT) underpinned the study. The sampling technique used nonprobability sampling with 200 respondents. The data was analysed using descriptive analysis and SEM-PLS path analysis. The results showed that performance expectancy has a positive and significant influence on behavioural intentions. Similarly, using the UTAUT model, Ndayizigamiye (2012) investigated the adoption of e-commerce from 180 SMMEs in the Pietermaritzburg area in South Africa. The findings reveal that although facilitating conditions have not influenced the decision to adopt e-commerce in the surveyed SMMEs, social influence, effort expectancy and performance expectancy are determinants of e-commerce within the selected SMMEs

Sombultawee (2020) conducted a study to identify antecedents and consequences of e-commerce adoption in small and medium enterprises. The research was based on a modified UTAUT framework, incorporating existing IT resources and knowledge. The study surveyed the retail SMEs in different stages of technology adoption with 88 respondents analysed using structural equation modelling (SEM). The results showed that performance expectancy and effort expectancy, along with facilitating conditions, contributed to e-commerce adoption, while social influence did not have a significant influence.

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In line with the previous studies, Rozmi, Bakar, Abdul and Nordin (2019) investigated the intentions to adopt the application of Information and Communication Technology (ICT) amongst SMEs in Malaysia. Using the Unified Theory of Acceptance and Use of Technology Model (UTAUT), a survey was conducted with 250 small enterprise owners using a self-reported questionnaire to examine the relationship between factors that influence SME owner's intentions to use ICT, factors that influences action to use ICT, and control factors that mediate the effects of the process of using the ICT in running all the business activities. The findings suggested that three out of five factors in UTAUT affect small enterprise owners' intention to adopt ICT in their business namely effort expectancy, social influence and facilitating conditions.

Also, Pobee (2021) conducted a study on the factors that influence Ghanaian entrepreneurs to adopt e-commerce. Cross-sectional data were gathered from 520 entrepreneurs in the most populous and industrious regions in Ghana. The unified theory of acceptance and use of technology (UTAUT) was employed to effectively understand the unexplored phenomenon of e-commerce adoption among Ghanaian entrepreneurs. Partial Least Square-Structural Equation Modeling (PLS-SEM) was used to test the hypothesized relationships. The findings indicated that performance expectancy, effort expectancy, and social influence positively and significantly influenced the behavioural intention to adopt e-commerce. Facilitating conditions and behavioural intention had a significant positive relationship with the adoption of e-commerce.

Azam, Morsalin, Rakib and Pramanik (2021) explored the factors affecting e-commerce adoption in Bangladesh by applying an extended version of the Unified Theory of Acceptance and Use of Technology (UTAUT) model which includes perceived risk, perceived cost and personal awareness with perceived usefulness, perceived ease of use, social influence, and facilitating conditions. The study applied a mixed methods research approach by combining qualitative field study and quantitative survey. A PLS-based structural equation modeling was applied to a dataset of 253 individuals, which was collected by applying a convenient sampling technique. The study results revealed that perceived usefulness, perceived cost, personal awareness and facilitating conditions affect consumer behavioural intention while facilitating conditions, as well as behavioural intention, have a positive influence on actual use of e-commerce.

Irene and Mauritsius (2021) conducted a study to identify the factors that influence the intention to use XYZ e-commerce to buy fashion products online. Using the UTAUT model, the researchers examined the influence of variables such as performance expectancy, effort expectancy, social influence, and facilitating conditions on behavioural intention to use e-commerce. It was a quantitative study where the data were collected by distributing questionnaires using google Forms targeting XYZ's users in the Jabodetabek area. Using the structural equation modeling (SEM) and SMART PLS for data analysis, the result of this study showed that performance expectancy and social influence have a significant influence on behavioural intention to use. Meanwhile, effort expectancy and facilitating conditions do not have a significant influence on behavioural intention to use.

Kofoworola and Ojo (2022) conducted a study that focused on the influence of performance expectancy and government regulations on electronic commerce adoption in Nigeria. The study adopted the cross-sectional survey method in the generation of data. The target population of the study consisted of the Academic staff of Abubakar Tafawa Balewa University Bauchi. The number of academic staff gave a total population of 700 Staff. The sample size was obtained using the Krejcie and Morgan (1970) table for determining the minimum returned sample size for a given population. Descriptive statistics and Spearman's rank correlation were used for data analysis and hypothesis testing. Empirical results confirm that performance expectancy and government regulations significantly influenced electronic commerce adoption in Nigeria.

Furthermore, Lim, Lim and Trakulmaykee (2017) investigated empirically the factors influencing e-commerce adoption among SMEs in west Malaysia. This study takes three factors into account: perceived barriers, organisational readiness, and competitive pressures. Questionnaires were used to collect data, and Smart PLS was used to analyse it. The findings revealed that Perceived Barriers have a negative significant influence on e-commerce adoption among medium-sized enterprises, but not for small-sized enterprises. There is a significant difference in organisational readiness between small enterprises. Competitor pressures are significant for both small entreeprises.

Finally, Awiagah, Kang and Lim (2016) researched the factors influencing e-commerce adoption among Ghanaian small enterprises. Their study combined technological, organisational, and environmental determinisms with social constructivism to create a practical framework for

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understanding e-commerce adoption among Ghanaian small enterprises. For data analysis, structural equation modelling was used. According to the findings, government support has the greatest direct influence on e-commerce intentions. Managerial supports, as well as the influence of enabling and regulatory conditions, are important factors in encouraging SME e-commerce adoption in Ghana. The results also showed that Ghanaian small enterprises tend to imitate successful first movers to avoid the risks that attend e-commerce technology.

**Influence of E-commerce Adoption on Performance**

Influence of the adoption of e-commerce on organisation performance, much research has been undertaken to identify its influence. Shahzad, Chin, Altafand and Bajwa (2020) study on small enterprise adoption of e-commerce and its influence on their performance in click-and-mortar and pure-play e-retailers in Malaysia. This research uses the census-sampling technique to collect the data from the respondents. Then, the data were used to investigate its measurement model and structural model via the analysis from IBM, SPSS 20 and SmartPLS 3.0. The findings of the study show that the use of e-commerce increases small enterprise performance, and the use of e-commerce is influenced by performance expectancy, effort expectancy and facilitating conditions.

In line with the above, Chin (2018) focused his study on SMEs' adoption of technology and its influence on their performance. It examined the relationships among performance expectancy, effort expectancy, social influence, facilitating condition, perceived risk, use of e-commerce and SME performance. The research framework has been developed based on the

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Resource-Based View (RBV) and the Unified Theory of Acceptance & Use of Technology (UTAUT). The research data was collected from Malaysian SMEs operators who adopted e-commerce. A total of 1,595 companies were studied, out of which 202 questionnaires were returned.

This research used the census-sampling technique while the data were analysed by using the SPSS 20 and SmartPLS 3.0 to examine its measurement model and structural model. The results showed that performance expectancy, effort expectancy, facilitating conditions and perceived risk have a significant direct relationship with the use of e-commerce, except for social influence. The use of e-commerce showed a significant direct relationship with SME performance. Aside from that, the use of e-commerce as a mediating variable revealed that with the significant use of e-commerce by SMEs, performance expectancy, effort expectancy, facilitating conditions and perceived risk influenced SME performance except for social influence.

Using the resource-based view of a firm, Ndayizigamiye (2012) investigated the influences of e-commerce on marketing and operations functions and how these influences have affected the performance of Taiwanese SMEs with the moderating roles of size. The researchers conducted a survey and obtained 110 usable responses from Taiwanese SMEs. The researchers identified the influence on performance using regression analysis. The results showed that the operations and marketing aspects of e-commerce have strong influences on the performance of SMEs. SMEs' size moderated the influences of operations and marketing aspects on performance.

In another study, Rosnita and Wirdiyanti (2019) empirically conducted a study to identify factors that affect the decision to adopt e-commerce within

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SMEs, analyse the influence of e-commerce adoption on their business performance, and investigate the effect on financial inclusion in Indonesia using the resource-based view of firm and transaction cost theory. The results indicated that e-commerce adoption decision is affected by sales turnover, social media, duration, and business age. From financial inclusion perspective, it reveals that e-commerce influence on business performance represented by sales growth and competitive advantage promotes financial inclusion within SME adopters.

Liang, Young and Liu (2010) conducted a meta-analysis on 42 published empirical studies to examine how different factors in the resource-based perspective affect firm performance. The purpose of the study was to aggregate previous research that adopts the resource-based view (RBV) to examine whether information technology (IT) and organisational resources have a significant effect on firm performance. The findings revealed that mediated model which includes organisational capabilities as mediators between organisational resources and firm performance can better explain the value of IT than the direct-effect model without organisational capabilities. Second, technological resources can improve efficiency performance but may not enhance financial performance directly. Third, internal capabilities affect performance but it is external capabilities that affect financial performance.

Sedighi and Sirang (2018) investigated the effect of e-commerce on Small performance. This research is descriptive-correlative research. The population of this research involved all managers of small enterprises in Tehran, which was determined to be 373 subjects based on Krejcie and Morgan's table as the sample size. The researcher administered the

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questionnaires and the data analysis based on structural equation modeling. The partial least square was also used. The results indicated that using e-commerce is significantly effective on small enterprises performance and e-commerce application is significantly effective on performance elements such as financial performance, internal process, customers, growth and learning.

Hendrawan, Sucahyowati and Cahyandi (2018) determined the effect of e-commerce on improving the performance of SMEs in Cilacap, Indonesia. This study used quota sampling which was used to sample 30 units of SMEs. The sampling technique used was purposive sampling. The results of the research concluded that e-commerce has a positive effect on the performance of SMEs. This was shown by the increase in sales volume. More sales will increase the income that the end is the welfare of SMEs.

Olise, Anigbogu, Edoko and Okoli (2014) examined the determinants of ICT adoption for improved SME performance in Anambra State, Nigeria. The study provided empirical evidence on levels of awareness and adoption patterns of ICT facilities among SMEs; it evaluates factors influencing ICT adoption in the SME sector and assesses the influence of ICT adoption on SMEs' performance. The simple percentage, mean, standard deviation, t-test statistics, and regression analysis were used to conduct the various analysis of their study. Findings revealed that there was a significant difference in the levels of awareness and adoption patterns of ICT facilities among SMEs.

Correspondently, Alderete (2019) conducted a study on electronic commerce's contribution to SME performance in manufacturing firms using a structural equation model. The study aimed to extend the empirical literature

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on the relationship between ICT, electronic commerce and SME performance in developing countries. To achieve this goal, the researchers employed a sample of 87 manufacturing firms from the city of Bahía Blanca, Argentina. By estimating a structural equation model, they obtained that electronic commerce adoption has a positive and significant influence on SME sales, which is reinforced, by the level of ICT use.

Mahliza, (2019) investigated the effect of e-commerce adoption using social media on business performance. The study was conducted on 104 respondents in Jakarta Region which were taken by purposive sampling method. Data were analysed using structural equation modeling with Partial Least Square (PLS). The result indicated that micro enterprises that adopt e-commerce using social media were influenced by perceived benefits and the external environment, but they were not influenced by their characteristics of knowledge and skill in information technologies. The e-commerce adoption also proved to have a positive effect on the business performance of micro enterprises.

Alzahrani (2018) critically examined the influence of e-commerce on business strategy, especially on small and medium-sized enterprises (SMEs) in Saudi Arabia. It also investigates the relationship between e-commerce and business strategy and how the e-commerce niche changes SMEs' strategic management approach. Additionally, the paper identifies the factors that moderate this relationship. To evaluate and examines the influence of e-commerce on business strategy, the study used a quantitative method by conducting a questionnaire survey of Saudi Arabian SMEs. The study confirmed that e-commerce has a strong relationship with business strategy.

Abdulsaleh and Worthington (2013) reviewed literature on the various financing sources available for small enterprises. In order to attain a more in-depth understanding of the financing decisions of small enterprises, the study also explored the effects of the characteristics of both SMEs and their owner-managers on the financing methods chosen and employed by small enterprises. It was found that small enterprises significantly differ from large firms in terms of their financing decisions and behaviour. The study further reported that a major characteristic of Ghana's small enterprises relates to ownership structure or base, which is either sole proprietorships or partnerships.

**Firm Size as a Moderator**

Firm size as a determinant of enterprise performance has been investigated in the past (Pervan & Višić, 2012; Alabdullah, Ahmed & Yahya, 2018) however, its specific role as a moderator has been largely ignored even though it has been suggested that firm characteristics like firm size could play an interacting role in the relationship between e-commerce adoption and enterprise performance (Awa, Ojiabo & Emecheta, 2015). This present study, therefore, considers the moderating effect of firm size on enterprise performance in the context of e-commerce adoption. In this study, the number of employees in the organisation defines firm size.

Based on prior studies on innovation (Sun, Cegielski, Jia & Hall, 2018), firm size is identified as a critical organisational factor that would influence the extent of e-commerce use in an organisation and thereby affect firm performance availability, and decision agility, as well as prior technology experience. Firm size is commonly cited in innovation diffusion literature (van

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Oorschot, Hofman & Halman, 2018), yet different opinions exist as to the role that firm size plays in the process of innovation diffusion, due to the tension between resource availability and organisational inertia (Cao & Li, 2018). On one hand, large firms generally possess slack resources that can facilitate implementation and usage to a greater degree thereby affecting performance (LiPuma, Newbert & Doh, 2013). On the other hand, firm size is often associated with inertia; that is, large firms tend to be less agile and flexible than small firms.

Generally, smaller firms often lack the resources to fully adopt e-commerce activities compared to larger firms. For instance, in a recent study by Coad and Duch-Brown (2017), smaller firms were reported to face e-commerce adoption challenges more frequently than larger firms, a result that seems to reinforce the notion that larger firms are better placed to handle e-commerce adoption than smaller firms since large usually have the resources required to invest in e-commerce with more ease than the micro or small firms (Beynon, Munday & Roche, 2021; Lacka, Chan & Wang, 2020). For example, the possession of other assets that could be used as e-commerce tools is easier for larger firms to obtain than smaller or micro firms (Yin, 2020).

Large organisations will have surplus resources, skilled employees, and experience that enables them to manage uncertainty and risk easily compared to relatively micro and smaller enterprises (Boxall & Huo, 2021). The ability of an organisation to manage uncertainty and risk will depend on its capabilities and resources, i.e., organisational size. Hence, consistent with the resource-based view which argues that firms gain competitive advantage based on resources available to them, firm size serves as a resource that

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determines and influences the performance of a firm in relation to its adoption of e-commerce.

**Lessons Learnt**

Most of the studies were carried out in Asia and Europe with a selected few in Africa, raising questions regarding the applicability of their findings to developing African economies such as Ghana. In the same vein, the divergent views expressed by various authors concerning what is meant for small enterprises also add to the problem of generalizability of the result of a study on small enterprises in one context to another context, especially in the fashion industry.

Furthermore, methodologically, the studies were mostly quantitative and the design utilised was cross-sectional design. The authors employed a self-administered questionnaire to gather data from either owners or managers of small enterprises and measured the study variables, using a five-point Likert scale though few studies used a seven-point Likert scale for data measurements. The reason cited for the predominant use of the survey design was to arrive at conclusions applicable to representative proportions of the population involved in each case.

In all cases, the main surveys were preceded by pre-tests to ensure easy understanding and completion of instruments by respondents. Simple random sampling was applied in selecting respondents from homogeneous populations. However, in situations where there were significant differences in the population or there was a need to differentiate between categories of respondents, other sampling techniques such as stratified sampling were adopted. In addition, reliability and validity tests were conducted in all cases.

Finally, demographic and business-related data were collected from respondents in addition to data on the key variables of each study.

Statistically, the technique predominantly used by the researchers for data analysis was structural equation modelling, while other researchers utilise correlation, regression and other statistical methods to test the direction and strength of relationships among the variables of interest. In respect of regression, multiple regression techniques such as hierarchical regression were employed in assessing the unique and composite variances explained by the independent variables. The review informed the drawing up of the study's conceptual framework.

**Conceptual Framework of Electronic Commerce Adoption and Performance of Small fashion design enterprises**

Adom (2015) asserts that the conceptual framework serves as the "blueprint" of research, providing clarity and direction to the ideas expressed. Antonenko (2015) also emphasized the significance of a conceptual framework as the foundation for research. Based on the purpose of the study, which sought to examine the electronic commerce adoption and performance of Small fashion design enterprisesin Kumasi Metropolis, Ghana, and the guiding objectives of the study, the conceptual framework was developed and presented in Figure 1.

By reflecting on the Unified Theory of Acceptance and Use of Technology (UTAUT), the study argued that when managers strategically adopt e-commerce in their operations, would lead to enhanced performance. Thus, through the determinants, as shown in the figure, the managers would be able to strategically maneuver their way towards maximizing profits.
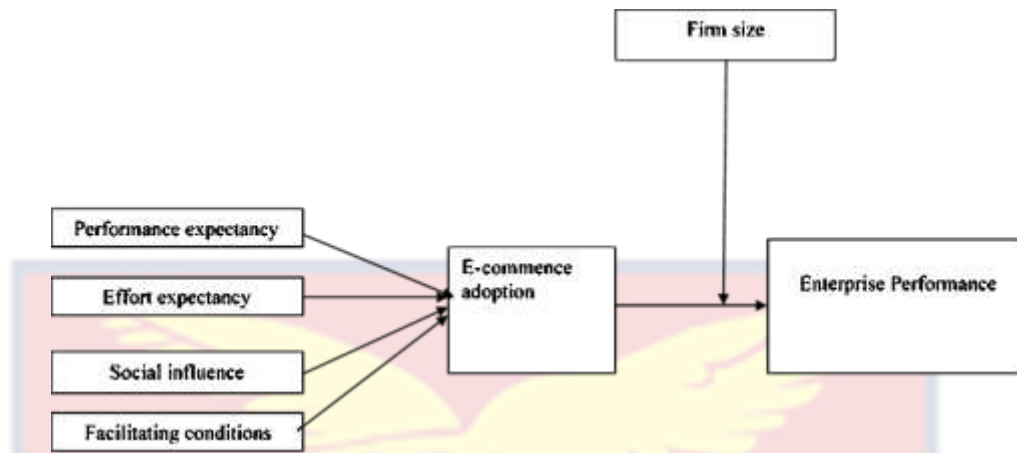
*Figure1: Conceptual Framework of Electronic Commerce Adoption and Performance of Small fashion design enterprises.*

Source: Adamu (2022)

Firstly, in line with UTAUT (Venkatesh et al. 2003), it is proposed that performance expectancy, effort expectancy, social influence, and facilitating conditions constitute the constructs, which serve as determinants for e-commerce adoption. In explaining the four core constructs of UTAUT, Venkatesh et al (2003), note that performance expectancy could be defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance; effort expectancy as the degree of ease associated with the use of the system; the third construct, used in explaining UTAUT, is the social influence. Venkatesh et al. (2003) define this construct as the expected influence of others on the user to start and continue using the new system and technology. The last construct in UTAUT is the facilitating conditions, defined as the degree to which an individual believes that an organisational and technical infrastructure exists to support the use of the system.

In line with Abebe (2014) who holds the view that e-commerce adoption influences small enterprise performance, the second component of this study's conceptual framework showed the independent variable (e-commerce adoption) and its influences on enterprise performance. Herzallah and Mukhtar (2015) also argued that there is an influence of e-commerce adoption on small enterprises performance. This study extends the ongoing research on e-commerce adoption by examining the relationship between e-commerce adoption and the performance of small enterprises.

Based on prior studies on innovation (Sun, Cegielski, Jia & Hall, 2018; Cowling, Liu & Zhang, 2018), firm size is identified as a critical organisational factor that would influence the extent of e-commerce use in an organisation. This may affect firm performance and technology experience. Firm size was used as moderating variable in this study.

**Chapter Summary**

This chapter provided a review of the related literature on small enterprises' adoption of e-commerce. Many studies on e-commerce adoption were presented and reviewed in this chapter. It is demonstrated that theories have been developed or adapted in the study of e-commerce. The unified theory of acceptance and use of technology model and the resource-based theory are two of these theories. These were discussed in detail at the start of this chapter. Some studies used a single theory, while others used a combination of two or more theories. This chapter described the concept of e-commerce, as well as its classification and performance, in addition to the theories used.

# CHAPTER THREE

# RESEARCH METHODS

## Introduction

The research method section of this study describes the methods and procedures that were used and followed in conducting the research. This section presents a description of the research paradigm, the research approach and research design employed, and the population and the sampling technique that was used for the research. It also provides a vivid description of data collection instruments and data collection procedures as well as procedures for data analysis.

## Research Philosophy

Every researcher is guided through the research procedure by certain beliefs, values, and a view of the world (Adjei, 2015). Kivunja and Kuyini (2017) refer to research philosophy as paradigms or philosophical assumptions, which precede the commencement of a study. Saunders, Lewis and Thornhill (2016) added that the term research philosophy refers to a system of beliefs and assumptions about the development of knowledge. The types of beliefs held by individual researchers based on these factors will often lead to embracing a strong qualitative, quantitative, or mixed-methods approach in their research (Creswell & Hirose, 2019). Saunders, Lewis and Thornhill (2016) identified five major philosophies that have shaped social science research over the years, these are post-positivism, critical realism, interpretivism, postmodernism and pragmatism.

This study adopted the post-positivist paradigm. Unlike other philosophies that hinge on exploratory enquiries, the post positivists are of the

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view that there is abundant knowledge out there where researchers should systematically explore that knowledge by explanatory techniques. According to Saunders, Lewis and Thornhill (2016), post-positivism relates to the philosophical system that embraces issues that can be scientifically verified and hence provides a basis for generalization. This means that post-positivists focus on procedures that lead to the generation of facts uninfluenced by human interpretation.

It was based on the use of existing theory to develop hypotheses. These hypotheses was tested and confirmed, leading to the further development of theory, which then is tested by further research (Creswell, 2009; Saunders, Lewis & Thornhill, 2016). Saunders, Lewis and Thornhill (2016) and Sekaran and Bougie (2016), are of the view that post-positivism gives room for objective reality and has the goal of universal truth that deals with human practices in the field of management sciences. For the reasons stated above, the positivist methodology is employed in this study to enable a better understanding of the key constructs of e-commerce adoption, and SMEs' performance.

**Research Approach**

Landrum and Garza (2015) categorise the approaches to research into three main domains namely: (a) qualitative, (b) quantitative, and (c) mixed methods. Saunders, Lewis and Thornhill (2016) provide three significant differences between quantitative and qualitative research methods. The first difference is that the quantitative research method permits the researcher to isolate and define variables and link them together to frame research hypotheses. However, this is not the case with respect to the qualitative

research method.

The next difference is that the quantitative research method gives room for objectivity when it comes to the processes involved in the data collection and analysis. Contrarily, in the qualitative research method, subjectivity is often introduced during data collection procedures and analysis. Finally, while the quantitative research method allows for the use of larger samples and the generalization of the sample results to the entire population, the purpose of the qualitative research method is not for the generalization of the sample results to the entire population.

This study, therefore, employed the quantitative research approach based on the nature of the study purpose under consideration, specific objectives, hypotheses, and the nature of the primary data collected and analysed. Specifically, the study's objectives demand that the researcher collect numerical data for analysis and interpretation of the phenomena under investigation. By recapitulation, the following objectives were addressed; to assess the level of e-commerce adoption among Small fashion design enterprises; to examine the determinants of e-commerce adoption among Small fashion design enterprises; to analyse the effects of e-commerce adoption on the firm performance in the fashion industry in Kumasi Metropolis; to analyse the moderating role of firm size on the relationship between e-commerce adoption and firm performance in Kumasi Metropolis.

Creswell (2014) asserted that the quantitative approach deals with explaining phenomena by collecting numerical data that are analysed using mathematically based methods (statistics). This approach allows for clear comparisons of the variables and establishment of causal relationships. Also

the quantitative research method grants the researcher an opportunity to generalize the results of the sample to the population from which the sample was collected.

**Research Design**

Sekaran and Bougie (2016) and Saunders, Lewis and Thornhill (2016) categorised research design into three broad categories based on the purpose of the study namely, exploratory, explanatory and descriptive designs. Exploratory research is typically used when a researcher examines a new interest or phenomenon. When the subject of study itself is relatively new, the researcher tries to explore the phenomenon. The major emphasis of exploratory research is on the discovery of new ideas and insights, which can be used as a foundation for further research (Saunders, Lewis and Thornhil, 2016).

With explanatory research, the focus is to connect ideas to understand the cause and effect which simply means researchers will have to explain the relationship between two variables. Since the focus is on the relationship between variables, there should be enough understanding to predict what the outcome will be with some accuracy (Saunders, Lewis and Thornhill, 2016). It is concerned with determining cause and effect relationships. Explanatory research aims to develop a precise theory that can be used to definitively explain the phenomena, which leads to the generalisation of the research.

The third type of design is the descriptive design. Here, the research is conducted to describe situations or an aspect of an existing phenomenon or event (Smith, 2007). The researcher observes and then describes what was observed (Babbie, 2004). A descriptive study is one in which information is

collected without changing the environment (Tison, Avram, Kuhar, Abreau, Marcus, Pletcher & Olgin, 2020). Sometimes these are referred to as correlational or observational studies. According to Cooper and Schindler (2003), a descriptive study is concerned with finding out the what, where and how of a phenomenon.

Although there are several designs, the design of this research will be descriptive correlational, thus, a blend of descriptive and explanatory research designs. Descriptive studies portray the variables by answering who, what, and how questions (Rubin & Babbie, 2016) while explanatory design's focus is to connect ideas to understand the cause and effect, which simply means, researchers want to explain the relationship between two variables. Descriptive correlational design is important because of the insufficient or insignificant body of research making it particularly valuable for exploring the issue. The nature of the objectives also required that objective one assessed the level of e-commerce adoption among Small fashion design enterprises, and objective two examined the determinants of e-commerce adoption among Small fashion design enterprises) were being analysed using descriptive statistics (means and standard deviation) whiles objective three examined relationship and effect hence, correlational.

**Study Area**

The study was conducted in the Kumasi Metropolis, Ghana. The Kumasi Metropolis is one of the thirty (30) districts in the Ashanti Region. The Metropolis shares boundaries with Kwabre East and Afigya Kwabre Districts to the north, Atwima Kwanwoma and Atwima Nwabiagya Districts to the west, Asokore Mampong and Ejisu-Juaben Municipality to the east and

Bosomtwe District to the south. The population of Kumasi Metropolis is one million seven hundred and thirty thousand, two hundred and forty nine (1,730,249) which represents 36.2 percent of the total population of the Ashanti Region (Boamah, 2010).
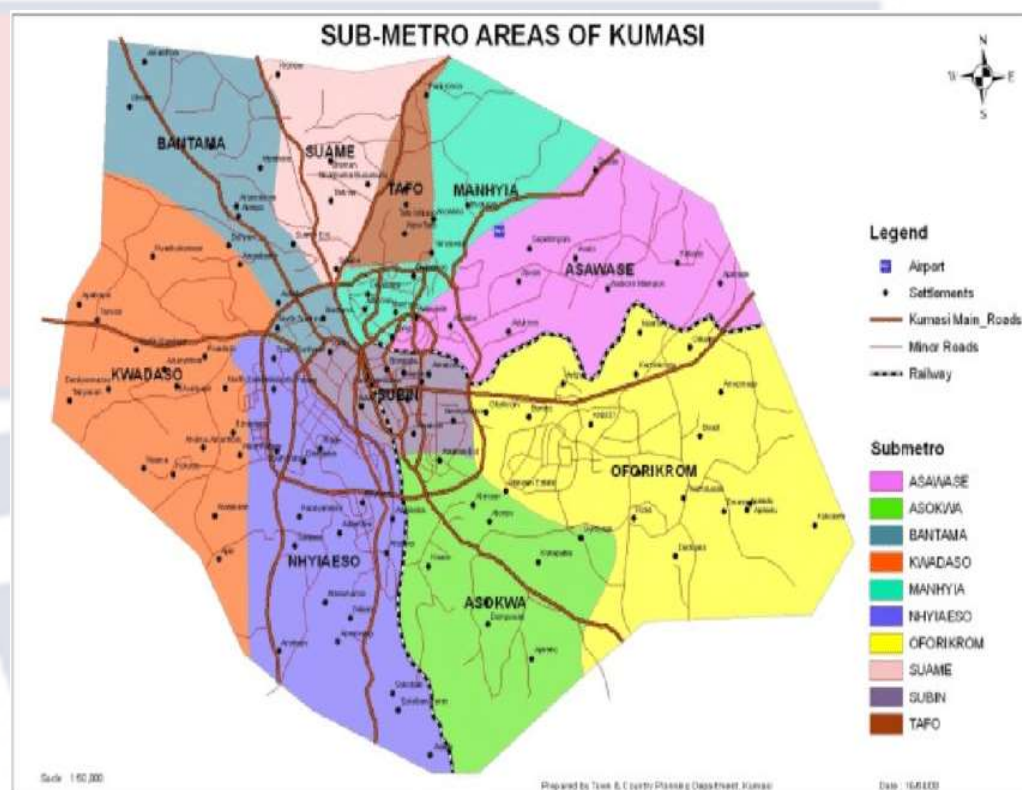


*Figure 2:* shows the map of the Kumasi Metropolitan Assembly. The area where the researcher conducted the study.
Source: Town and Country Planning Department, (2017)

About 86% of the active population in Kumasi is economically active. Kumasi has a strategic location supported by a large population, making the Kumasi metropolis a strategic place to build a business. The economic activities sustaining the livelihood of the residents in the Metropolis can be categorized into Service, Industry and Agriculture (Kumasi Metropolitan Assembly, 2017). Available statistics show that, out of 638, 234 establishments in Ghana, about 126,662 (19.8%) operate as SMEs while the majority operate as micro enterprises (Dubbeling, Carey & Hochberg, 2016).

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Other studies have found that about 90 percent of companies registered are SMEs (Mensah, 2004; Asamoah, 2014) of which the fashion designers fall part.

One of the creative industries in Kumasi Metropolis shows the most significant growth is the fashion industry. According to Nyarko, Essuman, Peligah and Crentsil (2015), the fashion sector contributes around 39.71%. The fashion industry in its broadest sense includes enterprises that are into clothing furniture, housing, automobile, food, toys and many others, but most commonly, it is dominated by clothing and dressmakers (Sarpong, Howard & Osei-Ntiri, 2011). The fashion industry plays a very prominent role in the socio-economic development of Kumasi Metropolis and beyond by helping generate income for living and it is a means through which people acquire their clothing needs (Agyei, Kumi & Yeboah, (2016).

The 2017 composite budget report for Kumasi Metropolitan Assembly disclosed that Kumasi is the second largest city in Ghana with a cluster of enterprises, Majority of them are small enterprises. Some of these enterprises are registered whilst others are not registered with the Ghana Revenue Authority. The data from National Association of Fashion Designers showed that majority of their registered members are located in the Kumasi Metropolis. This informs the reason for choice of Kumasi metropolis for the study. The study, therefore, focused on Small fashion design enterprises.

**Population**

Sherif (2018) defined 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 population for this study consists of Small

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fashion design enterprisesin the Kumasi Metropolis. Data acquired from the Ghana National Fashion Designers Association (GNFDA) indicates that the total number of registered Small fashion design enterpriseswithin the Kumasi Metropolis is 1200. These enterprises range from small tailoring shops to larger fashion design and production enterpries. Hence, the accessible respondents for this study were 1200.

**Sample and Sampling Procedure**

Etikan and Bala (2017) define sampling as the process of selecting a representative few or units from a larger group or population, which is used as a basis for estimating certain characteristics or elements of the group or population. The reason advanced researchers use sample surveys instead of a census is due to its complete coverage of the entire population which is not always advantageous when dealing with a large population (Saunders, Lewis and Thornhill, 2016). Also, a sample survey affords the researcher to save time and cost of investigating the entire population.

Moreover, under the circumstances of similar characteristics of a large population, it is advisable to use the sampling approach (Gerring & Cojocaru, 2016). Sekaran and Bougie (2016) posit that sampling can broadly be categorised into two main designs, namely, probability sampling and non-probability sampling. Whereas probability sampling design permits each element of the population to have a known and non-zero chance of being selected to be included in the sample, non-probability sampling design does not allow each of the elements of the population to have a known chance of being selected (Langer, 2018).

Kariuki, Wanjau and Gakure (2011) recommended that researchers should resort to the determination of an optimum sample size for their studies. The optimum sample size is often determined either by direct calculation using appropriate statistical formulas or by reference to tables, which set out recommended sample sizes for a given population (Sekaran & Bougie, 2016). The statistical formula for the calculation of the study's sample size emanated from Cooper and Schindler (2001). At a 95% confidence level, Z- score of 1.96 (*t* table), a margin of error of 0.05 and a sample proportion of 0.5, a sample size of 291 was deemed appropriate for a population of 1200.

$$n = \left( \frac{\frac{Z^2 * P(1-P)}{E^2}}{1 + \left( \frac{Z^2 * P(1-P)}{E^2 * N} \right)} \right)$$

Where n is the size of the sample

Z is the Z score

P is the Sample proportion

E is the Error term

N is the Population of the study

$$n = \left( \frac{\frac{1.96^2 * 0.5(1-0.5)}{0.05^2}}{1 + \left( \frac{1.96^2 * 0.5(1-0.5)}{0.05^2 * 1200} \right)} \right)$$

$$n = \left( \frac{\frac{3.8416 * 0.25}{0.0025}}{1 + \left( \frac{3.8416 * 0.25}{0.0025 * 1200} \right)} \right)$$

$$n = \left( \frac{0.9604}{\frac{0.0025}{1+\left(\frac{0.9604}{19.645}\right)}} \right)$$

$$n = \left( \frac{384.16}{1.3201333} \right)$$

$$n = 291$$

The convenience sampling technique was adopted for this study. Convenience sampling (also known as Haphazard Sampling or Accidental Sampling) is a type of nonprobability or nonrandom sampling where members of the target population meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate is included for the study (Etikan, Musa & Alkassim, 2016). It is also referred to the researching subjects of the population that are easily accessible to the researcher (Kellehear, 2020). Convenience samples are sometimes regarded as 'accidental samples' because elements may be selected in the sample simply as they just happen to be situated, spatially or administratively, near to where the researcher is conducting the data collection.

Convenience Sampling is affordable and easy, in addition, the subjects are usually readily available. Convenience sampling was adopted because most of the contacts on Ghana National Asociation of Fashion Designers data base was inactive, as a result, making it difficult to reach out to all members on the data base.  Also with the available respondents obtained from the data base, most were not around due to the prevalence of the COVID 19 pandemic and this made it difficult for the study to use other forms of sampling

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technique. The advantages of using this type of sampling technique are due to the ready availability of participants and the fastness with which data can be gathered. The disadvantages are the risk that the sample might not represent the population as a whole, and it might be based on volunteers (Sedgwick, 2013).

**Data Collection Instrument**

A self structured questionnaire was used in collecting data for this study. Sekaran and Bougie (2016) postulated that greater uniformity, consistency and objectivity are guaranteed when a questionnaire is used for data collection.

In addition, the privacy and convenience of respondents can be accomplished during questionnaire completion, thereby ensuring greater anonymity (Neelankavil, 2015). Close-ended questions were used to elicit responses needed to answer the research questions and achieve the objectives set for this study. The closed-ended questions require the respondent to choose from among a given set of responses and require the respondent to examine each possible response independent of the other choice. The use of a self-administered questionnaire is justified since based on the busy nature of the respondents, they could best respond in a non-supervised way.

The questionnaire for the study comprised five (4) sections – A, B, C and D with a Seven-Point Likert-type scale where: 1= weak agreement and 7 = strong agreement (see appendix). Section A solicited five responses relating to the demographic characteristics of participating small enterprises which include age of the firm, age of owner-manager, educational level of owner-manager, etc, (see Appendix 1) Section B had eleven questions on the e-

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commerce adoption level among Small fashion design enterprises. In measuring the e-commerce adoption level in the organisational, a questionnaire was adopted from Amril and Sari's (2019) measures.

Section C had sixteen questions on the determinants of e-commerce adoption which were adopted from the e-commerce adoption determinants scale developed by Venkatesh et al. (2012), which measured four constructs namely, performance expectancy, effort expectancy, social influence and facilitating conditions and section D had questions on enterprise performance. Performance was measured using the scale developed by Santos and Brito (2012), comprising both financial and non-financial measures of performance. Find attached questionnaire in Apendix A.

**Pre-Testing**

Zikmund, Carr and Griffin (2013) defined the pre-testing process as "a collective term for any small exploratory research technique that uses sampling but does not apply rigorous standards". Kelly (2019) posits that pre-tests are required ahead of the main survey. This process assists in ensuring that instructions, questions, and scale items are clear. They further help potential respondents to comprehend the questions and respond appropriately. Upon approval of the questionnaire by the department, the study engaged in pre-testing on ten (10) small fashion-designing enterprises in Cape Coast Metropolis. This sample size is deemed appropriate as it conforms to Saunders et al.'s (2016) minimum criteria of 10 for pilot studies by students.

The pre-testing questionnaires were retrieved from the 10 respondents successfully. The questionnaires were scanned for errors, and incompleteness and were further coded into IBM, SPSS software for reliability checks.

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**Validity and Reliability**

To ensure content validity of the instrument, the study ensured proper definition of measuring items, scale scrutiny by experts and scale pre-testing (Almanasreh, Moles & Chen 2019). Reliability and validity are two key components to be considered when evaluating a particular instrument. The level of the reliability of an instrument is measured by Cronbach's Alpha value (Saunders & Lewis, 2012). As posited by Misajon, Pallant and Bliuc (2016), Cronbach's alpha coefficient for variables is generated to validate the reliability of the instrument. Aigbogun, Ghazali and Razali (2017), also indicated that scales with a Cronbach's alpha coefficient of 0.70 and above are considered reliable.

The Cronbach's alpha results of the pre-test demonstrated that the questionnaire items were fit for the main study. According to Table 1, the use of e-commerce has a Cronbach Alpha of 0.742, e-commerce adoption level has 0.844 and determinants of e-commerce adoption have 0.772.

**Table 1: Computed Reliability Coefficients for the Pre-Test Data Collected**

| Skills | No. of items | Cronbach Alpha |
|---|---|---|
| Use of e-commerce | 05 | .742 |
| E-commerce adoption level | 11 | .844 |
| Determinants of e-commerce adoption | 16 | .772 |

Source: Field Data, Adamu (2022)

**Data Collection Procedure**

The data collection took place in December 2021 by the researcher alone at the Kumasi Metropolis. The hand delivery and collection of questionnaire method was employed. This method was employed because of

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the difficulty in getting most of the respondents to respond to a questionnaire through the internet or post for this type of study in Ghana.

The method chosen allowed the researcher to visit the premises of the enterprises in Kumasi Metropolis and hand-deliver the questionnaire to the respondents. The researcher waited for 7-10 minutes for the questionnaire to be filled by the respondent. Out of the 291-sample respondents that were targeted, 264 of them responded completely to the survey making a response rate of 91 percent. The non-response rate was as a result of incomplete information provided by respondents in the questionnaire, and this was discovered during the data entry.

**Data Processing and Analysis**

The statistical software employed for this study was IBM Statistical Package for Social Science (IBM, SPSS) version 24 and Smart PLS version 3.3.3 respectively. The IBM, SPSS were employed for descriptive statistics and the Smart PLS was employed for structural equation modelling. Descriptive statistics such as frequencies and percentages, means and standard deviations were employed. Frequencies and percentages were employed to determine the characteristics of the respondents, means and standard deviations were employed to analyse objectives one, whiles research objectives two, three and four were analysed using Partial least squares structural equation modeling (PLS-SEM).

PLS-SEM is a second-generation statistical technique that "enables researchers to incorporate unobservable variables measured indirectly by indicator variables (Lowry & Gaskin, 2014). PLS-SEM uses available data to estimate the nexuses of the path in the model to minimise the residual variance

of the endogenous constructs. It estimates path model nexuses that maximize the $R^2$ values of the endogenous constructs (Hair et al., 2014). It is also useful when dealing with complex models and small sample sizes (Rezaei & Ghodsi, 2014; Shahijan, Rezaei, Preece & Ismail, 2014). PLS-SEM is also more appropriate where theory is less developed (Ravand, & Baghaei, 2016; Rönkkö & Evermann, 2013).

According to Hair et al. (2014), there are two forms of measurement scale in structural equation modelling which is formative and reflective. Whereas the formative measurement scale is the indicators that cause the constructs of the study, the reflective measurement scale constructs the cause indicators of the study. This current study employed the reflective measurement scale.

Furthermore, Jeon (2015) itemised many benefits SEM has over other models such as regression. These benefits are as follows. Firstly, SEM uses "latent variables" which allows multiple indicators to capture constructs validly and reliably. Secondly, SEM makes the causal equation model between latent variables clearer as compared to regression. Thirdly, SEM allows one or more independent variables to be regressed on one or more dependent variables. Lastly, In SEM, a researcher can show the direct effect, indirect effect, and total effect because several exogenous variables and endogenous variables can be estimated simultaneously.

PLS is quite robust with regard to inadequacies like skewness, multicollinearity of indicators and misspecification of the structural model (Cassel et al, 1999). In SEM, confirmatory factor analysis, correlation analysis, and regression analysis can be conducted at one time in a model. In

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line with the benefits above associated with SEM, this study relied on PLS-SEM to test the various hypotheses. PLS-SEM is made up of two key elements; the measurement model and the structural model.

**Measurement Model Assessment**

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 per cent of the indicator's variance, thus providing acceptable item reliability. Thus, indicators with loadings below the 0.708 thresholds were deleted in the model unless retaining those indicators did not affect the overall reliability of the constructs.

The second step is assessing internal consistency 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 exploratory research," and values between 0.70 and 0.90 range from "satisfactory to good" (Hair et al., 2017:112). Cronbach's alpha is another measure of internal consistency reliability that assumes similar thresholds but produces lower values than composite reliability (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' 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

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alternative, Dijkstra and Henseler (2015) proposed rho_A as an approximately exact measure of construct reliability, which usually lies between Cronbach's alpha and the composite reliability. Hence, rho_A may represent a good compromise if one assumes that the factor model is correct. In this study, the researcher relied on values of all the measures of internal consistency because they all met the 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 per cent 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. Fornell and Larcker (1981) proposed the traditional metric and suggested that each construct's AVE should be compared to the squared inter-construct correlation (as a measure of shared variance) of that same construct and all 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) show 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 the rule of thumb value of the HTMT ratio, 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. Hair et al. (2019) believe the basic standard valuation criteria, to be considered, including the coefficient of determination ($R^2$), the $Q^2$ ("blindfolding-based cross-validated redundancy measure"), and 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, $R^2$ of 0.25, 0.5 and 0.75 is considered as weak, moderate and substantial respectively."

In addition, "a predictive relevance ($Q^2$) of 0.02, 0.15 and 0.35 is considered as small, medium and large respectively." Furthermore, "effect size ($f^2$) of 0.02, 0.15 and 0.35 is seen as small, medium and large respectively." Finally, a significant level of 5% or less or a t- statistic of 1.96 or higher is

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appropriate for a structural model.

**Ethical Consideration**

As indicated by Bell and Waters (2018), any social researcher should seek permission from the respondents to state clearly their intentions while being guided by research ethics. In this study, the respondents were therefore informed and assured of anonymity and confidentiality. As such, all information received from them (respondents) was treated with the highest degree of confidentiality.

In addition to this, the researcher also informed the respondents that they were free to cease to give any response if they so wish. Finally, the researcher did not withhold any information about the study's possible risks, discomfort or benefits or deliberately deceived study subjects on these matters. After the application for ethical clearance, a letter was obtained from the institutional review board, the University of Cape Coast, with the ethical clearance number, UCCIRB/CHLS/2021/81 that authenticated the research, (see appendix C).

**Chapter Summary**

This chapter discussed in detail and a systematic manner the methodology used for the study, and this included the research setting, research design, the study population, sampling and sampling procedures adopted for the study, the instruments used, and procedures followed in the collection and analysis of data. The discussion provided the basis for the choice of the study's population and the sample of the study.

In line with the purpose of the study, the chapter described in detail the instrument to be used for this study and the analysis to be conducted based on

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each objective. The chapter provided data on the reliability of the instrument of measurement used in this study and provided the ethical consideration of the study which contained the assurance that respondents anonymity is protected and the results will be used for purely academic purposes.

# CHAPTER FOUR

# RESULTS AND DISCUSSION

**Introduction**

This Chapter discussed the findings of the study in relation to the objectives. It opened with a discussion on the demographic characteristics of the firm and respondents.  The analyses of the objectives were done using descriptive statistics including means and standard deviations and PLS-SEM. The discussion of the various objectives was done in the reflection of the theories employed in the study.

**Demographic Characteristics of the Firms and Respondents**

The demographic characteristics entail the firm characteristics and the respondents' characteristics as cited in Table 2. The firm characteristics comprise the type of business ownership, number of employees, type of employee, years of operation and the number of years the business has been using e-commerce.

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**Table 2: Demographic Characteristics of the Firm**

| Variable | Frequency | Percentage (%) |
|---|---|---|
| Business Ownership | | |
| Sole Proprietorship | 232 | 87.9 |
| Partnership | 32 | 12.1 |
| Number of Employees | | |
| 1- 5 | 135 | 51.1 |
| 6-30 | 93 | 35.2 |
| 31-100 | 28 | 10.6 |
| No employees | 8 | 3.0 |
| Employee Type | | |
| Family | 16 | 6.1 |
| Apprentice / Trainees | 240 | 90.9 |
| Hired | 8 | 3.0 |
| Years of Operation | | |
| Below 5 years | 94 | 35.6 |
| 5-10 years | 113 | 42.8 |
| Above 10 year | 57 | 21.6 |
| Years of using E-commerce | | |
| Below 5 years | 146 | 55.3 |
| 5-10 years | 87 | 33.0 |
| Above 10 year | 31 | 11.7 |

Source: Adamu (2021)

From Table 2 above, out of the 264 firms studied, 87.9 % were sole proprietorships. This was followed by Partnership firms which were 12.1 %. None of the firms studied were registered with the Registrar General's Department (RGD). It can then be seen from the study that sole proprietorship is the main form of a registered business entity operating in the fashion industry in the Kumasi Metropolis. This finding conforms to Abdulsaleh and Worthington (2013), who reported that a major characteristic of Ghana's

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SMEs relates to ownership structure or base, which is either sole proprietorships or partnerships. The predominance of sole proprietorships over other legal forms may be because they have fewer legal and tax requirements compared to the other business forms. Thus, sole proprietorship enterprises are easier to set up and operate. Furthermore, a sole proprietorship gives the owner independence in terms of decision-making (Sarapaivanich, 2006).

The size of the sampled entities was determined according to the number of employees. Three size categories were defined based on the number of employees  (TealAbhayapala & Kennedy, 2002) as cited in (Abor & Quartey, 2010). Firms with less than 5 employees were classified as micro firms. The majority of the firms (51.1%) in the study were micro enterprises, which employed between 1 to 5 people. This was followed by small-sized enterprises (with employees ranging from 6 to30 people), which constituted 35.2% of the respondents. About 10.6% of the enterprises were medium-sized (with employees ranging from 31 to 100 employees) and 3.0 % of the firms did not have employees. This conforms to the findings of Dubbeling, Carey and Hochberg (2016), which stated that the majority of enterprises in Ghana fall under the Micro category.

In terms of employee category, 90.9% of the respondents have their workforce being apprentice/Trainees. 6.1% are family members and 3.0 % are hired. The years of operation of the firm were measured according to the number of years the firm has been in existence. Table 2 presented the majority of the firms in the study (42.8%) had operated a business for 5 to 10 years. The second largest group of firms in terms of age were those that were established below 5 years (35.6%). Around 21.6 % of the enterprises in the

study have been in existence for more than 10 years, indicating that there were more enterprises within the age range of 6 to 10 years.

Finally, the Period of e-commerce usage was measured according to the number of years the enterprise has been using e-commerce technology. The results showed that the majority of the firms in the study (55.3%) had been using e-commerce technologies for less than 5 years. 33.0% of the firms had been using e-commerce for 5 to 10 years and those with experience beyond 10 years were 11.7%.

Next, the respondent's characteristics comprise age, position in business, level of education and the length of time the respondent has been in business. This is represented in Table 3.

**Table 3: Demographic Characteristics of Respondents**

| Variable | Frequency | Percentage (%) |
|---|---|---|
| Age (years) | | |
| Below 20 years | 1 | 0.4 |
| 20-29 years | 60 | 22.7 |
| 30-39 years | 128 | 48.5 |
| 40-49 years | 51 | 19.3 |
| 50-59 years | 24 | 9.1 |
| Position/rank of the respondent | | |
| Owner | 90 | 34.1 |
| Manager | 51 | 19.3 |
| Owner-manager | 123 | 46.6 |
| Level of Education | | |
| No Education | 15 | 5.7 |
| Junior High School | 193 | 73.1 |
| Senior High School/Technical | 36 | 13.6 |
| Tertiary | 20 | 7.6 |
| Years of Experience | | |
| Below 5 years | 99 | 37.5 |
| 5-10 years | 130 | 49.2 |

Source: Field work (2021)

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With the age of the respondents, the results show that between the ages 30-39 years documented the highest responses with 48.5%, whiles ages below 20 years documented the lowest response with 0.4 %. This implies that the majority of the respondents are in their youthful period. Also, Respondents in the study were asked to state their position in the busi. The position the respondents sought included owner, manager, and owner-manager. Out of 264 respondents, 34.1 % reported they were owners of the enterprise, 19.3 % indicated they were managers, and owner-managers constituted 46.6 %. This shows that the majority of the respondents own and manage their enterprises. The result is in line with Walker and Webster (2006), who stated that the majority of SME owners are by themselves, the managers.

Based on the academic qualifications of the respondents, the study showed that most employees (73.1%) have Junior High School as their academic qualification or equivalent in various fields, (7.6%) of the respondents have degrees in various fields and (5.7%) had no education. This proves that the majority of the fashion designers were educated. Education is a prerequisite for effective and efficient performance, especially in e-commerce adoption. Finally, the business experience was measured using the period the respondent has been in the industry. The majority of the firms in the study (59.2%) had experience of 5 to 10 years. 37.5% of the respondents had experience below 5 years and those with experience beyond 10 years were 13.3%.

**Level of E-Commerce Adoption Among Small fashion design**

**enterprisesin Kumasi Metropolis**

This section presented the first research objective of the study by assessing the level of e-commerce adoption among Small fashion design enterprisesin Kumasi Metropolis. This was done to identify the fashion designers who adopt and use e-commerce for their operations. The result was analysed using the mean and standard deviation scores of the various statements describing the adoption and use. The mean score was reported using a scale of 1 to 7 with mean scores of 1 to 3.49 indicating 'low' and 3.50 to 7.0 indicating a 'high' level of adoption as applied in Dess et al., (2005) and replicated by Seidu et al., (2020). The Skewness and Kurtosis were additional checks for data normality and distribution. With the normality, Pallnat (2016) recommends that Skewness and Kurtosis values of plus or minus 1.5 shows that data is normally distributed. The results were presented in Table 4. According to the resuts, the issues of normality was not found as all the values were within the ±1.5 criteria.

**Table 4: E-commerce Adoption among Small fashion design enterprisesin Kumasi Metropolis**
**The table below measures the level of e-commerce adoption in Small fashion design enterprisesusing a scale of 1 to 7.**

| | Mean | Std. Deviation | Skewness | | Kurtosis | |
|---|---|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Std. Error | Statistic | Std. Error |
| The business advertises its products online using social media, website or email services | 5.45 | 1.72 | .427 | .150 | -.916 | .299 |
| I am able to engage my customers via social media and other e-commerce platforms | 4.95 | 1.96 | -.027 | .150 | -1.143 | .299 |
| I explore and get new fashionable styles online | 4.83 | 2.00 | .456 | .150 | -.992 | .299 |
| I organize and attend skills training workshops online | 2.83 | 1.78 | .466 | .150 | -.978 | .299 |
| I use the internet to source for fabric supplies | 2.88 | 1.89 | .546 | .150 | -.924 | .299 |
| I sell products online to customers | 3.03 | 1.84 | .458 | .150 | -1.145 | .299 |
| I use online communication platforms to stay in touch with partners and stakeholders | 4.82 | 1.82 | .442 | .150 | -1.200 | .299 |
| Publishes information on web page such as products, catalogues, brochures | 3.00 | 1.95 | .510 | .150 | -1.166 | .299 |
| Customers can place orders via website/social media/ email | 2.94 | 1.87 | .328 | .150 | -1.324 | .299 |
| Customers can pay electronically through mobile money | 4.76 | 1.99 | .373 | .150 | -1.217 | .299 |
| The company can order materials electronically from suppliers | 5.98 | 1.96 | -.236 | .150 | -1.143 | .299 |
| Overall mean score | 4.13 | 1.29 | .395 | .150 | -.937 | .299 |
| Valid N (listwise) | | | | | | |

Source: Adamu (2021)

From Table 4, the overall average mean score of e-commerce adoption

was quite high at 4.13 with a standard deviation of 1.29. This means that there

is a high level of e-commerce adoption by the Small fashion design

enterprisesin Kumasi Metropolis. The result shows that the enterprises advertise their products online using social media, websites or email services. The results further indicate that the fashion designers engage customers via social media and other e-commerce platforms, explore and get new fashionable styles online and allow customers to pay electronically through mobile money, while they can also order materials electronically from their suppliers.

However, from the information available in Table 4, some fashion designers do not; organise and attend skills training workshops online, (M=2.83; *SD*=1.78), use the internet to source fabric supplies (M=2.88; *SD*=1.89), sell products online to customers (M=3.03; *SD*=1.84), etc. The reasons for the non-adoption of the e-commerce platforms for such services are a result of inadequate knowledge and logistics to carry them out. Some of such logistics include own online payment systems or portals and security apparatus (Narayanasamy et al., 2008). In general, this means that from the overall mean score, the fashion designers studied are making strides to adopting e-commerce for their operations.

**E-Commerce Adoption and Firm Performance in the Fashion Industry in Kumasi Metropolis**

This section addressed the study's research objectives 2, 3 and 4. They are; to examine the determinants of e-commerce adoption among Small fashion design enterprises; to analyse the effects of e-commerce adoption on firm performance in the fashion industry; to analyse the moderating role of firm size on the relationship between e-commerce adoption and firm performance respectively. The e-commerce adoption variables were

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determined from the UTAUT. The objectives were achieved by first and foremost assessing the measurement model of the PLS-SEM. After the measurement model assessment, the study presented and discussed the results of each research objective.

**Measurement Model**

The study analysed research objectives 2, 3 and 4 using the Partial Least Square-Structural Equation Modelling (PLS-SEM) analytical approach. The assessment was done based on the following key underlying assumptions: item loadings, construct reliability and validity, convergent validity (average variance extracted) and discriminant validity. According to Henseler et al. (2009), these assumptions are tested to show whether the dataset is suitable for PLS-SEM and also to provide a clear meaning of the structural model results including the validity and reliability of the study.

**Item Loading**

In terms of assessing the item loadings as the first mode of assessment, the indicators' loadings of each construct were evaluated. The item loadings assessed the quality of the indicators measuring each construct within the context of the study. Based on the rule of thumb, items with loadings $\geq 0.70$ are a quality measure of their construct (Henseler et al., 2009). In view of this, items of each construct with loadings <0.7 were removed from the model. This is because; those items obtained from literature did not measure the study's construct within the area under study.

The result was presented in Figure 2
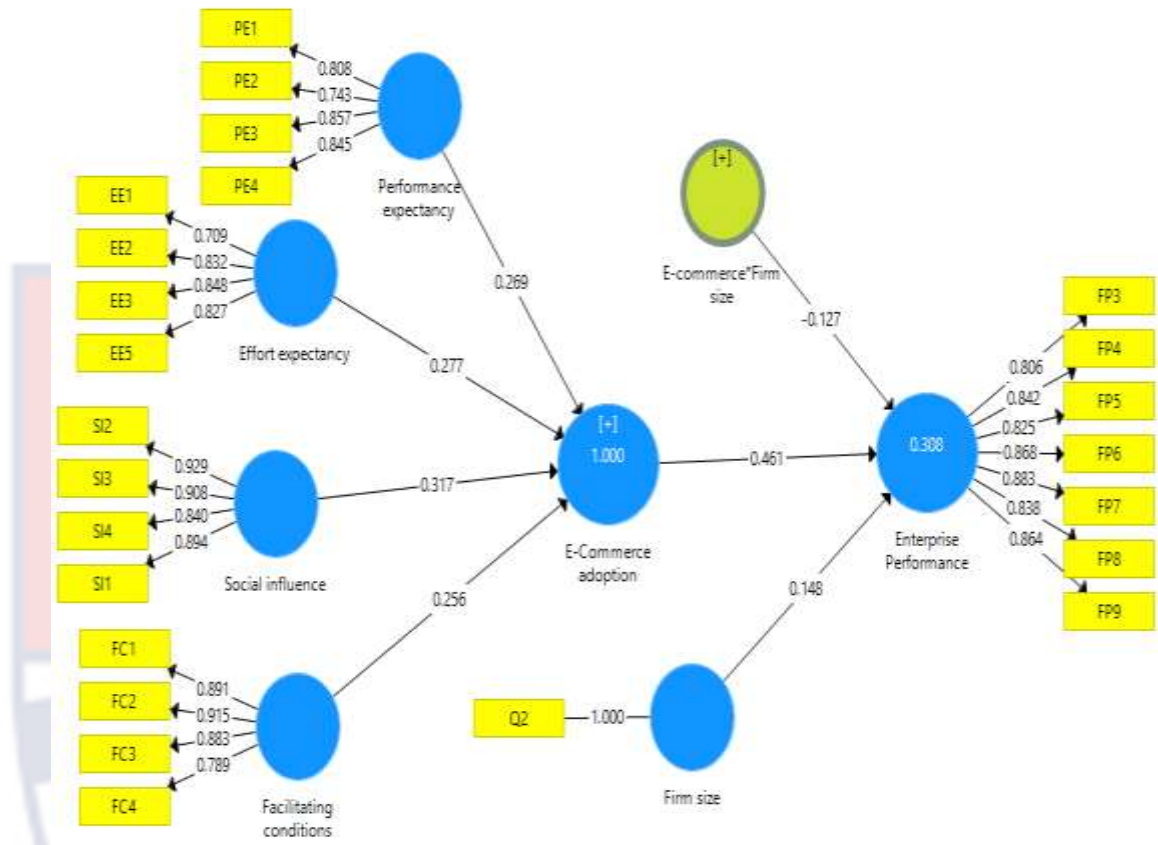
*Figure 2*: PLS-SEM Model

Source: Authors' construct, Adamu (2021)

Based on Figure 2, item loadings for performance expectancy ranged from 0.743 to 0.845; effort expectancy ranged from 0.709 to 0.848; social influence ranged from 0.840 to 0.929; facilitating conditions ranged from 0.789 to 0.915 while that of enterprise performance ranged from 0.806 to 0.883 (see appendix D, for details on the indicator loadings) All other item loadings less than seven (<0.7) were removed to indicate the quality measures of a given construct. As a result, the final model extracted served as a basis for further assessment of the PLS-SEM.

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**Construct Reliability and Validity**

Table 5 presented the results of other assessment criteria including construct reliability and validity and convergent validity (average variance extracted). From Table 5, the internal consistency which shows the proportion of variance of an indicator that can be described by its underlying latent variable (Hair et al., 2012) was assessed using the Cronbach's alpha (CA) result and rho_A result. The study reported the rho_A result because it is regarded as a much more rigorous measure of indicator reliability as compared to the CA (Chin, 2010; Hair et al., 2012). The rule of thumb is that Joreskog's rho_A ($\varrho$); scores should be > 0.70 in order to ensure satisfactory and acceptable results. It could be deduced that all the rho_A scores for the constructs were > 0.70 that is, ranging from 0.828 to 1, thus met the reliability criteria.

**Table 5: Construct Reliability and Validity**

|  | CA | rho_A | CR | AVE |
|---|---|---|---|---|
| E-Commerce adoption | 0.948 | 0.950 | 0.954 | 0.569 |
| E-commerce*Firm size | 0.935 | 1.000 | 0.944 | 0.515 |
| Effort expectancy | 0.819 | 0.828 | 0.881 | 0.650 |
| Enterprise performance | 0.934 | 0.937 | 0.947 | 0.717 |
| Facilitating conditions | 0.892 | 0.892 | 0.926 | 0.758 |
| Firm size | 1.000 | 1.000 | 1.000 | 1.000 |
| Performance expectancy | 0.832 | 0.844 | 0.887 | 0.663 |
| Social influence | 0.915 | 0.916 | 0.941 | 0.798 |

CA = Cronbach's alpha; CR = Composite reliability; CV = Convergent validity; AVE = Average Variance Extracted

Source: Field Data, Adamu (2021)

Table 5 also presented the composite reliability of the study to explain the extent to which specific constructs are sufficiently measured by their

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indicators when put together (Ringle et al., 2012). This means that CR requires all the indicators assigned to a given construct to have a strong mutual correlation. The rule of thumb is that CR scores should be ≥ 0.70 (Bagozzi & Yi, 1988; Ringle et al., 2012). It could be seen that this criterion was met since the CR score of each construct was >0.7. For e-commerce adoption, e-commerce, Firm size, effort expectancy, enterprise performance, facilitating conditions, firm size, performance expectancy and social influence, CR were 0.954, 0.944, 0.881, 0.947, 0.926, 1.000, 0.887 and 0.941 respectively. This means that all the assigned indicators had strong mutual relationships with their respective constructs.

The convergent validity (CV) of the study based on the Average Variance Extracted (AVE) score (Hair et al., 2012) was presented in Table 10. The AVE explains how the variance of an indicator is captured by the construct relative to the total amount of variance and the variance as a result of measurement error (Hair et al., 2012). The rule of thumb is that, all the AVE scores should have a minimum threshold ≥ 0.50 for each construct as suggested by Bagozzi and Yi (1988) and Hair et al. (2012). It could be deduced that the study met this criterion as all the constructs had AVE scores > 0.50.

**Discriminant Validity**

Table 6 further presented the quality of the model by testing for discriminant validity as suggested by Hair et al. (2012). According to Hair et al. (2014), discriminant validity (DV) assesses the structural model for collinearity issues. The DV is primarily tested using the Fornell and Larcker (1981) criterion and the Heterotrait-Monotrait (HTMT) ratio. It is to note that,

the HTMT ratio is regarded as a better and quality measure of discriminant validity (DV) as compared to the Fornell and Larcker's (1981) criterion (Hair et al., 2012) thus recommended for testing DV by Sarstedt, Ringle, Smith, Reams and Hair (2014). Nonetheless both measures were presented in the study starting with the HTMT in Tables 6 and 7 respectively.

**Table 6: Discriminant Validity - Heterotrait-Monotrait Ratio (HTMT)**

|            | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8 |
|------------|-------|-------|-------|-------|-------|-------|-------|---|
| 1. ECA     |       |       |       |       |       |       |       |   |
| 2. ECA*FS  | 0.306 |       |       |       |       |       |       |   |
| 3. EE      | 0.046 | 0.312 |       |       |       |       |       |   |
| 4. EP      | 0.548 | 0.280 | 0.645 |       |       |       |       |   |
| 5. FC      | 0.843 | 0.254 | 0.788 | 0.348 |       |       |       |   |
| 6. FS      | 0.161 | 0.122 | 0.169 | 0.233 | 0.100 |       |       |   |
| 7. PE      | 0.771 | 0.331 | 0.011 | 0.601 | 0.720 | 0.176 |       |   |
| 8. SI      | 0.668 | 0.249 | 0.504 | 0.467 | 0.803 | 0.158 | 0.725 |   |

Notes: ECA= e-commerce adoption; EE = Effort expectancy; EP = Enterprise Performance; FC = Facilitating conditions; FS = Firm size; SI = Social influence.
Source: Adamu (2021)

The HTMT ratio shows superior performance by having the ability to detect a lack of discriminant validity in common research scenarios. The rule of thumb is that; to achieve DV, HTMT values (correlation values among the latent variables) should be < 0.85 (Henseler, 2016). From Table 6, all the values for each of the constructs were below 0.85. This is a clear indication that each construct is truly distinct from the other. After these basic assessments, the study followed up with the analysis of the research objectives

in the next section. Table 7 assessed DV using the Fornell and Larcker (1981) criterion.

**Table 7: Fornell-Larcker Criterion**

| Constructs | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| E-Commerce Adoption*Firm size | **0.883** | | | |
| E-commerce adoption | -0.092 | **0.889** | | |
| Firm Size | -0.236 | 0.088 | **1.000** | |
| Performance | -0.226 | 0.186 | 0.235 | **0.846** |

Source: Adamu (2021)

For the Fornell-Larcker Criterion, the threshold is that the correlation of a construct against itself should be greater than the correlation of the construct with other constructs. As seen from Table 7, the bolded values show that issues of DV in respect of the Fornell-Larcker were not detected. The scores were all respectively higher than the correlates with other constructs.

**Structural Model**

After the measurement model was assessed to ensure that it meets the PLS-SEM criterion, the study presented the results of research objectives 2, 3 and 4. The objectives specifically are: to examine the determinants of e-commerce adoption among Small fashion design enterprises; to examine the effects of e-commerce adoption on firm performance as well as moderate the role of firm size on the relationship between e-commerce adoption and firm performance in the fashion industry in Kumasi Metropolis. This was done by assessing the direction and strength using the path coefficient ($\beta$) and level of significance with t-statistics obtained through 5000 bootstraps as recommended by Hair et al. (2014). The result of the objectives was presented in Table 8.

**Common Method Bias (CMB)**

Also captured in Table 8 is the inner model of the common method bias checks (i.e., the inner VIFs). The VIF (Variance Inflation Factor) is a collinearity text for issues of common method biases in the data. The CMB is usually the self-reported biases of resondents in a single data set of a study. When CMBs are present or detected, they invalidates the genueness of the data gathered from the study(Podsakoff et al., 2012). It is recommended that the scores of VIF of the indicators should range from 0 to 5.0 (Becker et al., 2015).

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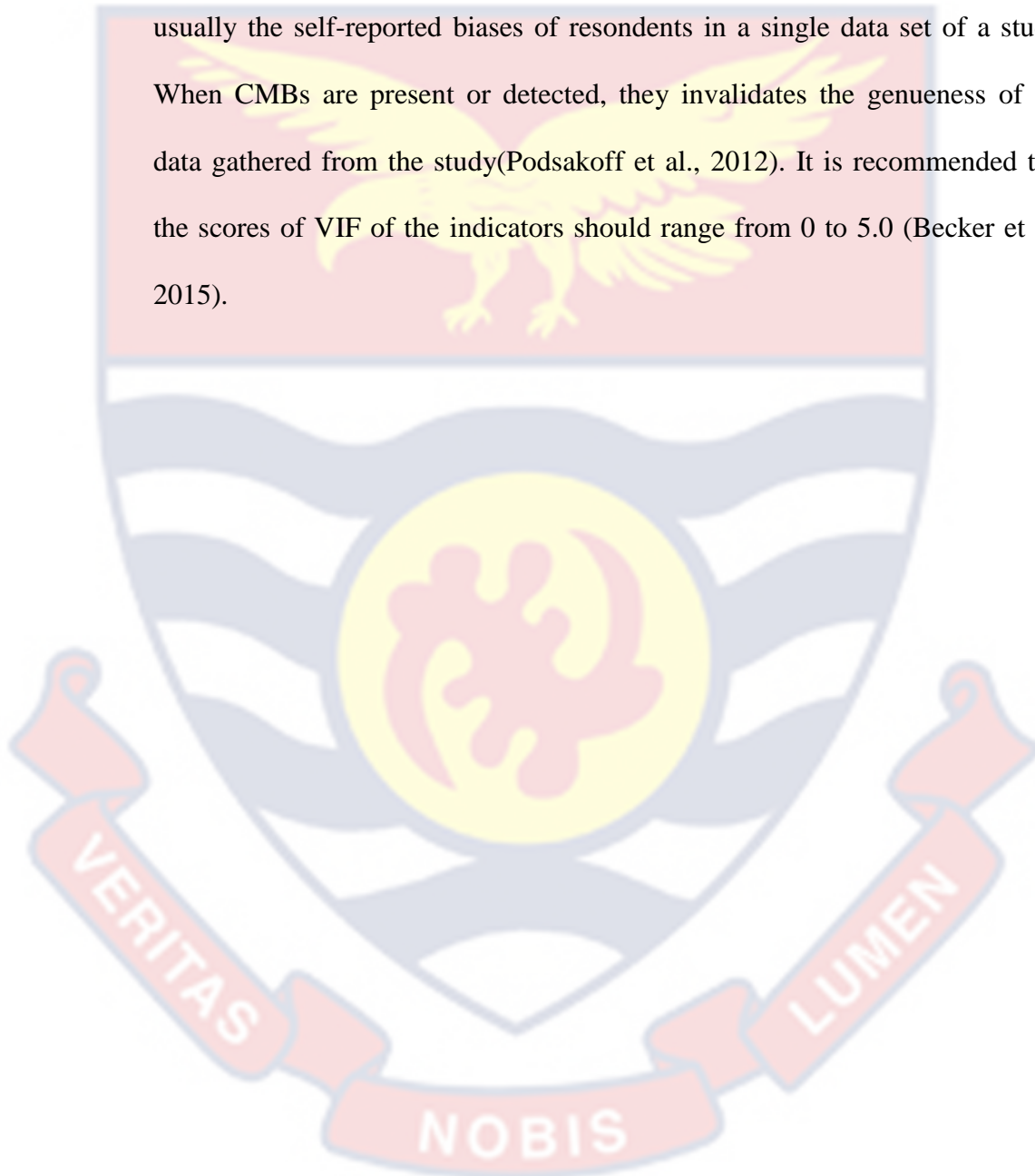
**Table 8: Result of the Structural Model**

|  | Hypotheses | VIF | β | T stats | P Values | $R^2$ | $Q^2$ | $f^2$ | Decisions |
|---|---|---|---|---|---|---|---|---|---|
| ECA |  |  |  |  |  | 1.000 | 0.563 |  |  |
| EP |  |  |  |  |  | 0.308 | 0.214 |  |  |
| PE -> ECA | $H_{1a}$ |  | 0.269 | 24.472 | 0.000 |  |  |  | supported |
| EE-> ECA | $H_{1b}$ |  | 0.277 | 25.858 | 0.000 |  |  |  | supported |
| SI -> ECA | $H_{1c}$ |  | 0.317 | 27.037 | 0.000 |  |  |  | supported |
| FC-> ECA | $H_{1d}$ |  | 0.256 | 24.867 | 0.000 |  |  |  | supported |
| FS -> EP |  | 1.064 | 0.148 | 2.762 | 0.006 |  |  | 0.031 |  |
| ECA-> EP | $H_2$ | 1.013 | 0.461 | 7.248 | 0.000 |  |  | 0.276 | supported |
| ECA*FS -> EP | $H_3$ | 1.065 | -0.127 | 2.153 | 0.032 |  |  | 0.022 | supported |

Note: * = $P<0.05$; ECA = E-commerce adoption; FS = Firm size; EP = Enterprise Performance; PE = Performance expectancy; EE = Effort expectancy; SI = Social influence; FC = Facilitating conditions

Source: Adamu (2021)

Firstly, from the Table 8, the VIF values showed that no issues of CMB were detected. The scores were all well below the 5.0 threshold. Also, the result of the structural model as presented in Table 8 was used to discuss the study's research hypotheses in the subsequent sub-sections. The results were presented based on the t-stat values as suggested by Hair et al. (2014). They recommended that t-stat values above 1.96 correspond to p-values < 0.05 and vice versa. Thus, the decision rule is that the null hypothesis ($H_0$) is rejected when the t-stat is > 1.96, thus p-value < 0.05, while one fails to reject it when the t-stat is < 1.96 with its p-value > 0.05. Also, the path coefficients were explained based on the criteria by Cohen (1988). He suggested that correlation coefficients of 0.10 represent weak or small correlation; a correlation coefficient of 0.30 represents a moderate correlation while a correlation coefficient of 0.50 represents a large or strong correlation.

The results in Table 8 showed that, PE (R=0.269; t=24.472; p<0.001), EE (R=0.277; t=25.858; p<0.001), SI (R=0.317; t=27.037; p<0.001), FC (R=0.256; t=24.867; p<0.001), FC (R=0.148; t=2.762; p>0.001) were significant determinants of e-commerce adoption. Also, e-commerce adoption has a significant positive effect on enterprise performance (R=0.461; t=7.248; p<0.001) and finally, the moderation effect of e-commerce adoption and firm size also had significant but inverse relationship with enterprise performance (see also Figure 3, the green line sloping downward) (R= -0.127; t=2.153; p>0.001). Moreover, the result shows that a change in entreprise performance by 30.8% is caused by variation in the joint effort of e-commerce adoption and firm size. This is demonstrated by the coefficient of determination ($R^2$) in the Table 8.

With respect to the predictive relevance of the hypothesised model, it can be concluded that the independent constructs (ECA and FS) had a weak predictive relevance on the R and $R^2$ values of enterprise performance ($Q^2$ = 0.214). Finally, it is portrayed that e-commerce adoption ($f^2$ = 0.276), firm size ($f^2$ = 0.031) and the moderation term ($f^2$ = 0.022) had moderate, weak and weak significant contributory effect on enterprise performance.
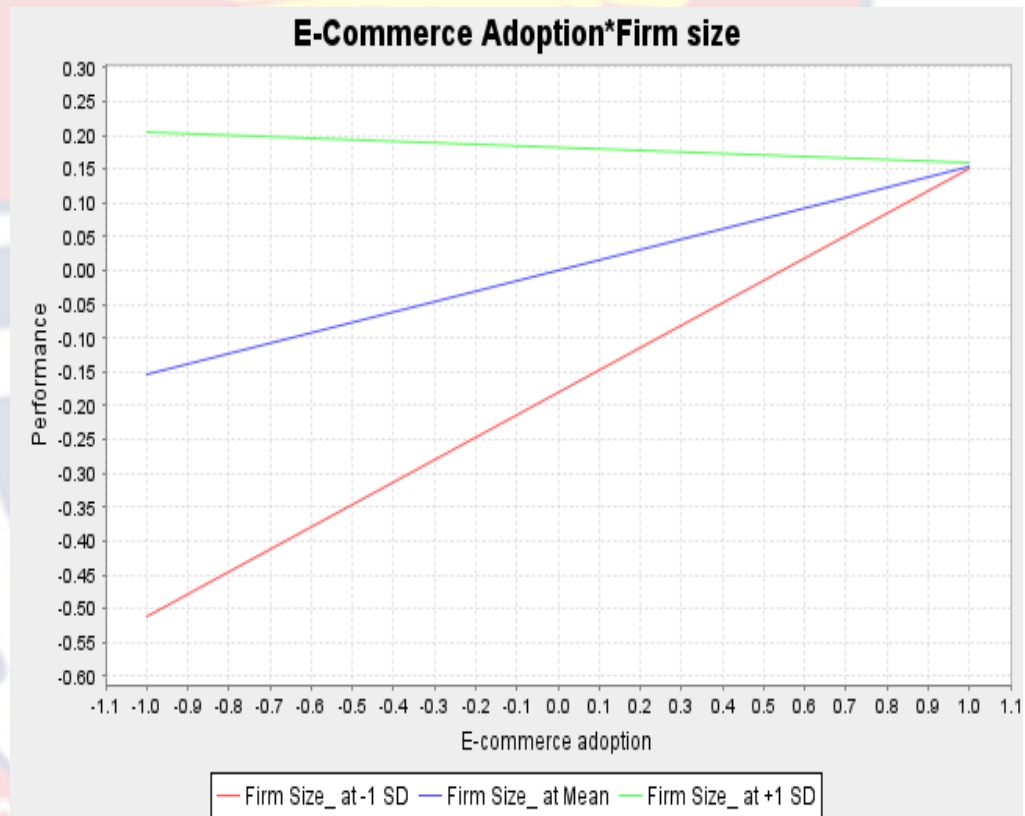


*Figure 3:* Moderation effect

Source: Adamu (2021)

**Discussion of hypotheses**

**Hypothesis 1**

The hypothesis consists of four sub hypotheses. The results show that performance expectancy, effort expectancy, social influence and facilitating conditions were the determinants of e-commerce adoption. Thus, in this study,

the element of e-commerce adoption among fashion designers in the Kumasi Metropolis are performance expectancy, effort expectancy, social influence, and facilitating conditions. In line with previous studies, Batra and Arora (2020) found that the factors for e-commerce adoption among firms were organisational culture, social influence, and technological competency. Kabanda and Brown (2010) further found that e-commerce adoption was based on a number of factors including organisational readiness, technological readiness, and the external environment by micro, small, and medium-sized enterprises in Medan. Again, the study corroborates with the findings of Jameel and Ahmad (2018), who researched the factors that affect the adoption of e-commerce in Erbil, and established that e-commerce adoption was contingent on ease of use and willingness of manager, customer needs and cost as well as expected benefits.

**Hypothesis 2**

The hypothesis that connects the e-commerce adoption and firm performance of Small fashion design enterpriseswas discussed in this section. The findings show that e-commerce adoption has a significant effect on the performance of the small fashion enterprises in Kumasi Metropolis. This means that when owners and or managers of fashion firms wish to increase their performance, then they should turn to employing e-commerce tools and platforms in their enterprises. By implication, e-commerce can harness the benefits of easy access to customers, achieving outputs quickly, and a platform to learn new skills. Through the adoption of e-commerce, small enterprises can expand their market without difficulty.

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This finding is supported by Shahzad, Chin, Altafand and Bajwa (2020) who researched SMEs' adoption of e-commerce and its influence on their performance in brick-and-mortar and pure-play e-retailers in Malaysia. They discovered that the use of e-commerce increases SME performance, and the use of e-commerce is influenced by performance expectancy, effort expectancy and facilitating conditions. The study also is in line with the position upheld by Wirdiyanti (2019) who, established that e-commerce adoption increases the fortunes of a firm in terms of sales growth and competitive advantage. The study further found support from Sedighi and Sirang (2018) whose findings revealed that e-commerce is significantly effective on SME performance and e-commerce application is significantly effective on performance elements such as financial performance, internal process, customers, growth and learning.

**Hypothesis 3**

This section examined the moderating role of firm size in the relationship between e-commerce adoption and the performance of Small fashion design enterprises. The objective was hypothesised as "firm size statistically moderates the nexus between e-commerce adoption and performance of Small fashion design enterprisesin Kumasi Metropolis". The results showed that firm size moderates such nexus. The moderation effect proved a negative relationship between e-commerce adoption and enterprise performance as a result of firm size (see Table 8). This indicates that the size of the firm plays a role in influencing the strength and direction of the association of e-commerce adoption and enterprise performance among fashion SMEs. Again, the result is indicative of the fact that the larger the size

of the firm, the more likely the owners or managers are willing to adopt e-commerce to improve performance and vice versa.

The findings are also in line with the study by Rosnita and Wirdiyanti (2019), where they established that the size of the SME including sales turnover, social media, duration, and business age were factors affecting SME performance. In addition, Kiplang and Bii (2016) discovered that e-commerce adoption alone is not sufficient to improve performance unless supported by a good number of employees in the firm. These employees with relevant skills can leverage the resources available on e-commerce platforms to improve performance.

**Chapter Summary**

The study examined e-commerce adoption and firm performance among small fashion enterprises in Kumasi Metropolis. In this chapter, results and discussions were presented to address the objectives of the study. The chapter presented the data that was collected and also helped answer the research questions and hypotheses, thus, producing findings that were discussed and related to views and outcomes from previous related studies.

# CHAPTER FIVE

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

**Introduction**

This Chapter presented the key findings of the research objectives of the study, conclusions drawn from the findings and recommendations for policy considerations. The chapter also provided suggestions for further research.

**Summary**

The study examined the influence of electronic commerce adoption on the performance of Small fashion design enterprisesin the Kumasi Metropolis of Ghana. Specifically, the study assessed the level of e-commerce adoption level among Small fashion design enterprises; examined the determinants of e-commerce adoption among Small fashion design enterprises; analysed the effects of e-commerce adoption on firm performance in the fashion enterprises and analysed the moderating role of firm size on the relationship between e-commerce adoption and firm performance in Kumasi Metropolis.

The study adopted the post-positivism philosophy thus relying on the quantitative approach and descriptive correlational design. A structured questionnaire was developed from extensive reviews of previous studies to gather data from 291 sampled respondents from 1200 fashion enterprises within the Kumasi Metropolitan Assembly. Using the convenient sampling technique, 264 valid responses with a response rate of 91 percent were used for data analysis. The data was then processed using the IBM, SPSS Statistics (version 24) and SmartPLS (version 3) software. Both descriptive (mean and standard deviation) and inferential statistics (partial least squares) were used to

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address the objectives of the study. The next paragraphs present the major findings of the study.

In relation to research objective 1, the study found high levels of e-commerce adoption and usage among the Small fashion design enterprisesstudied. Thus, the evidence gathered showed that fashion design enterprises within the Kumasi Metropolitan Assembly adopt and deploy e-commerce for their operations.

The study also examined the determinants of e-commerce adoption among Small fashion design enterprises. It was established that performance expectancy, effort expectancy, social influence, and facilitating conditions, were determinants of e-commerce adoption among the fashion designers in the Metropolis.

The third research objective focused on examining the effect of e-commerce adoption on the performance of Small fashion design enterprisesin the Kumasi Metropolis. Consistent with previous studies, the study found that e-commerce adoption was a significant predictor of performance in small fashion design enterprises in the Metropolis.

Finally, in terms of research objective 4, which assessed the moderating role of firm size in the relationship between e-commerce adoption and firm performance, the study found that firm size moderates the nexus between the constructs.

**Conclusions**

The study aimed and examined the e-commerce adoption and performance of Small fashion design enterprisesin the Kumasi Metropolis of

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Ghana. The following conclusions were drawn based on the study's key findings.

In reference to the first research objective, the study's result revealed small fashion designers adopt and use e-commerce for business within the Kumasi Metropolis of Ghana. The result has largely been supported by previous empirical studies, which suggest that firms in the fashion and design industry derive more benefits when they deploy e-commerce facilities and platforms for their operations. The study, therefore, concluded that the fashion design firms in Kumasi Metropolis adopt and use electronic commerce.

With reference to the second research objective, the study's result indicated that performance expectancy, effort expectancy, social influence and facilitating conditions were determinants of e-commerce adoption. The conclusion reached in the current study is that small fashion design firms base their decisions to adopt e-commerce on performance expectations, to ease human efforts, social influence and the availability of resources to go electronic.

Based on the findings in relation to research objective three, the study concludes that e-commerce adoption influenced the performance of small fashion enterprises. The study further concludes that when owners and managers of fashion enterprises enroll their operations on electronic platforms such as social media and websites as well as accept mobile transactions, it will lead to improved performance.

Finally, in terms of research objective four, the study's result indicated that firm size moderates the relationship between e-commerce and enterprise performance. The conclusion was reached that the performance of small

fashion enterprises can be differentiated based on their respective sizes. Thus, fashion designers should expand their operations and benefit from e-commerce advantages.

**Recommendations**

Based on the strength of the research findings and conclusions made, the following recommendations will be made. First, the study recommends that owners and managers of fashion enterprises should increase the adoption and use of e-commerce infrastructure to enhance their presence and efficient service delivery to their clients. This will bring relief to managers who try to use the manual approach to do business.

The study further recommends that small business owners within the fashion industry such as members of the Ghana National Fashion Designers Association collaborates with the Association of Ghana Industries (AGI) to roll out an e-commerce platform and training programs for the members. This will enlighten the owners and managers on the requisite resources and skills needed to engage in e-commerce.

In addition, it recommends that the government of Ghana through the Ghana National Fashion Designers Association (GNFDA) supports the small fashion designers to widen their dominance through the provision of financial support to enable them to enroll on the e-commerce platforms.

Finally, the study recommends that fashion design owners and managers expand their enterprises by increasing the number of employees in their establishments. This can be done by assessing relevant credit facilities available to small enterprises by government and financial institutions for expansion.

**Contribution to Knowledge**

The study has contributed theoretically to the utilisation of UTAUT in explaining e-commerce adoption among small enterprises. Though prior studies have looked at the e-commerce adoption among SMEs, none of them considered the moderating role of firm size on enterprise performance. Consequently, this study adds a developing country perspective to the existing literature on e-commerce adoption and enterprise performance among Small fashion design enterprises.

Also, the conceptual framework of the study could serve as a guide to future studies on e-commerce adoption as it portrays a new wave of discussion on the role of e-commerce determinants and firm size on the performance of SMEs in a developing country. This information is relevant as it informs the business owners and managers on what must be done in order to achieve optimum enterprise performance.

**Suggestions for Further Research**

The study focused on how e-commerce adoption influenced the performance of Small fashion design enterprisesin the Kumasi Metropolis. The study focused on only small firms within one assembly out of the 6 Metropolises in Ghana. As a result, generalising the study's findings to cover all Small fashion enterprises across the country could be misleading. The study, therefore, suggested that further research can extend the study area to capture all or other Metropolis within the country in order to aid the generalisation of findings. This will help gather the opinion of all fashion designers across the country on e-commerce adoption in Ghana.

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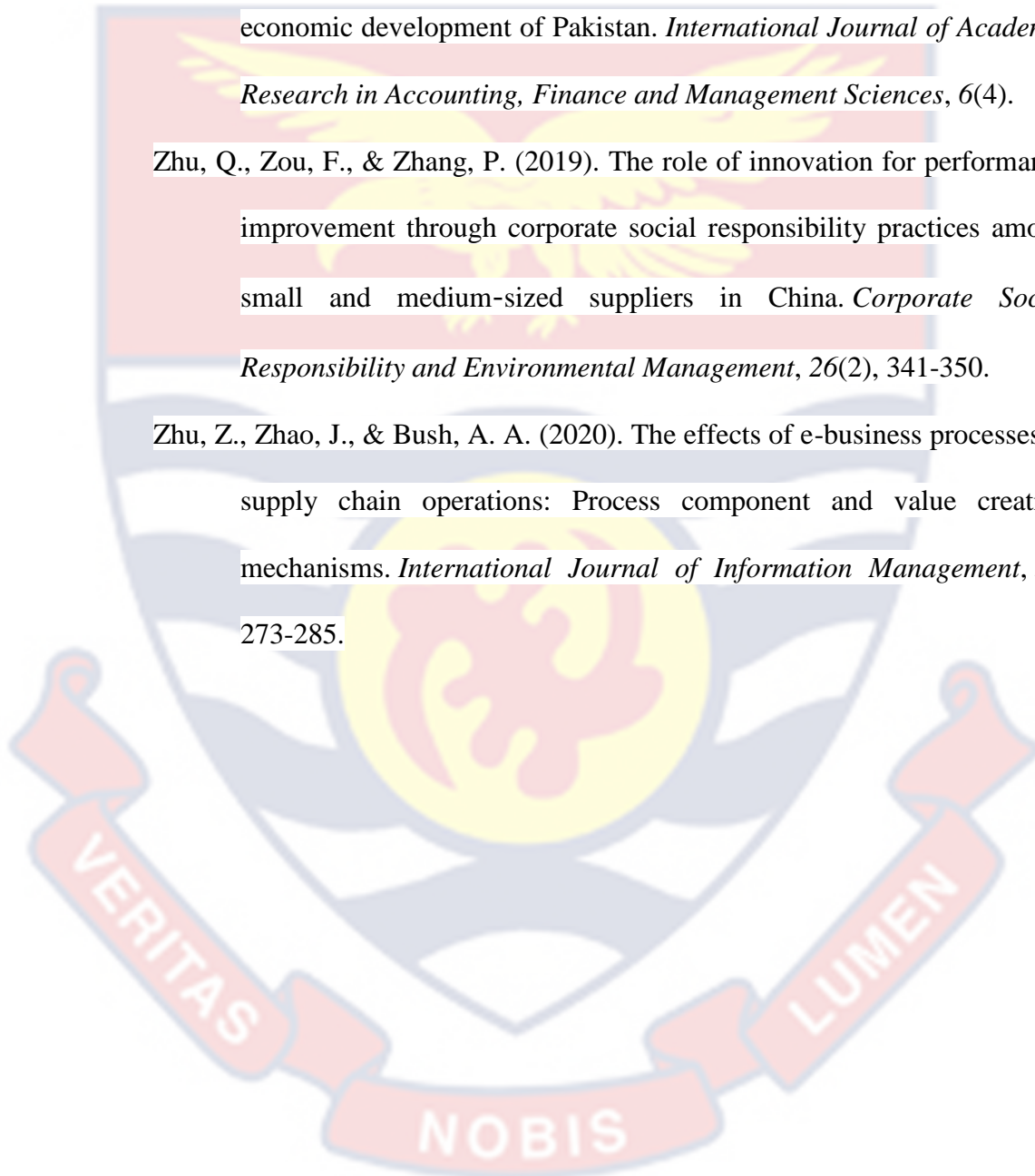
# APPENDICES

# APPENDIX A

# UNIVERSITY OF CAPE COAST

# COLLEGE OF HUMANITIES AND LEGAL STUDIES

## SCHOOL OF BUSINESS

## CENTRE FOR ENTREPRENEURSHIP AND SMALL ENTERPRISE DEVELOPMENT

## RESEARCH QUESTIONNAIRE FOR OWNERS AND/OR MANAGERS

**Introduction**

The purpose of this questionnaire is to seek information relating to the ELECTRONIC COMMERCE ADOPTION AND PERFORMANCE OF SMALL FASHION DESIGN ENTERPRISESIN THE KUMASI METROPOLIS OF GHANA. THE MODERATING ROLE OF FIRM SIZE, is a prerequisite for the award of a Master of Commerce in Entrepreneurship and Small Enterprise Development from the University of Cape Coast. Your organisation has been selected for this purpose and your responses will be needed in filling this questionnaire. You are assured of participant confidentiality and anonymity with respect to the information provided. Kindly tick **(√)** the appropriate boxes or provide answers in the spaces provided. Thank you for partaking in this important study.

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**SECTION A: DEMOGRAPHICS**

Please indicate by ticking [√] the appropriate box

1.  Which of this best describes your business' ownership?

    Sole Proprietorship [  ]    Partnership [  ]    Company [  ]

2.  Please indicate the number of employees you currently have in the business

    1 - 5  [  ]      6 - 30 [  ]    31-100 [  ]    No employee [  ]

3.  Which of these employee types do you have in your business?

    a.  Family                    [  ]

    b.   Apprentices / Trainees:         [  ]

    c.  Hired                    [  ]

4.  Who oversees managing of the day-to-day activities of the business?

    Owner [  ]      Manager [  ]    Owner-Manager [  ]

5.  How long has the business been in operation?

    Below 5yrs [  ]    5-10yrs [  ]    beyond 10yrs [  ]

6.  For how long have you been using e-commerce (social media, email, mobile money, website operations)?

    Below 5yrs  [  ]          5-10yrs [  ]          beyond 10yrs [  ]

7.  How many years of experience do you have in your current business?

    Below 5yrs [  ]      5-10yrs          [  ]          beyond 10yrs [  ]

8.  How old are you?

    Below 20yrs [  ]    20-29yrs [  ]  30-39yrs  [  ]

    40-49yrs [  ]        50-59yrs  [  ]      above 59yrs [  ]

9.   What is your highest level of education?

    No education [  ] Junior High School [  ]

    Senior High/Technical/Vocational Tertiary [  ]

    Other [  ]    specify………..

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**SECTION B: E-COMMERCE ADOPTION LEVEL**

Please indicate the **level of your agreement** with the statements below on a scale of 1 = **Weak Agreement** (WA) to 7 = **Strong Agreement** (SA). With regards to e-commerce (social media, email, mobile money, website operations) adoption in your business.

WA------------------------------SA

| SN | ITEM | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| 1. | The business advertises its products online using social media, website or email services | | | | | | | |
| 2. | I am able to engage my customers via social media and other e-commerce platforms | | | | | | | |
| 3. | I explore and get new fashionable styles online | | | | | | | |
| 4. | I organize and attend skills training workshops online | | | | | | | |
| 5. | I use the internet to source for fabric supplies | | | | | | | |
| 6. | I sell products online to customers | | | | | | | |
| 7. | I use online communication platforms to stay in touch with partners and stakeholders | | | | | | | |
| 8. | Publishes information on web page such as products, catalogues, brochures | | | | | | | |
| 9. | Customers can place orders via website/social media/ email | | | | | | | |
| 10 | Customers can pay electronically through mobile money | | | | | | | |
| 11 | The company can order materials electronically from suppliers | | | | | | | |

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**SECTION C**. **DETERMINANTS OF E-COMMERCE ADOPTION**

Please indicate the **level of your agreement** with the statements below on a scale of 1 = **Weak Agreement** (WA) to 7 = **Strong Agreement** (SA). With regards to the determinants of e-commerce (social media, email, mobile money, website operations) adoption in your business.

WA--------------------------SA

| NS | ITEMS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|-------|---|---|---|---|---|---|---|
| **PERFORMANCE EXPECTANCY** | | | | | | | | |
| 1. | I find e-commerce useful in my business | | | | | | | |
| 2. | Using e-commerce enables me to make sales quickly | | | | | | | |
| 3. | Adopting e-commerce would add value to my selling process | | | | | | | |
| 4. | Adopting e-commerce will increase my productivity | | | | | | | |
| **EFFORT EXPECTANCY** | | | | | | | | |
| 5. | My interaction with the e-commerce platform is clear and understandable | | | | | | | |
| 6. | It is easy for me to become skillful at using e-commerce | | | | | | | |
| 7. | I find e-commerce easy to adopt | | | | | | | |
| 8. | Learning to operate an e-commerce platform is easy for me | | | | | | | |
| **SOCIAL INFLUENCE** | | | | | | | | |
| 9. | People who influence my behaviour think I should adopt e-commerce | | | | | | | |
| 10. | People who are important to me think I should adopt e-commerce | | | | | | | |
| 11. | Friends suggestions and recommendations would influence my adoption | | | | | | | |
| 12. | I will adopt e-commerce because other entrepreneurs have adopted | | | | | | | |
| **FACILITATAING CONDTIONS** | | | | | | | | |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 13. | I can get help from others when I have difficulty using e-commerce | | | | | | | |
| 14. | I have the necessary knowledge to adopt e-commerce | | | | | | | |
| 15. | I have the resources necessary to adopt e-commerce | | | | | | | |
| 16. | E-commerce is compatible with other technologies I use. | | | | | | | |

## SECTION D: FIRM PERFORMANCE

Please indicate the **level of your agreement** with the statements below on a scale of 1 = **Weak Agreement** (WA) to 7 = **Strong Agreement** (SA) for the past 3 years.

WA-----------------SA

| SN | ITEMS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| 1. | There has been an increase in profit within the past 3 years | | | | | | | |
| 2. | There is a high return on investment within the past 3 years | | | | | | | |
| 3. | There has been a reduction in the operational cost in the last 3 years | | | | | | | |
| 4. | Market share has improved significantly in the past 3 years | | | | | | | |
| 5. | Sales volume has increased in the past 3 years | | | | | | | |
| 6. | The staff productivity has increased in the past 3 years | | | | | | | |
| 7. | Labour training programs are organized to improve personnel skills | | | | | | | |
| 8. | There is an improved and stable business relationship with suppliers of raw materials | | | | | | | |
| 9. | Business operational digitalization has improved in the past 3 years | | | | | | | |
| 10. | The business uses machines that are void of pollutant emissions | | | | | | | |

**THANK YOU FOR YOUR PARTICIPATION**

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# APPENDIX B

# INTRODUCTION LETTER

## UNIVERSITY OF CAPE COAST
### COLLEGE OF HUMANITIES AND LEGAL STUDIES
### SCHOOL OF BUSINESS

**CENTRE FOR ENTREPRENEURSHIP AND SMALL ENTERPRISE DEVELOPMENT (CESED)**

Telephone: 03320-91499
Direct:     03321-37870
Email:      cesed@ucc.edu.gh
            cesed.hod@ucc.edu.gh
Web:        cesed@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

15th November, 2021

Our ref: SB/CESED/E.3/

Your ref:

The President
Ghana Cooperative Fashion Designers Association.
Ho

Dear Sir,

**LETTER OF INTRODUCTION**

Mr. Mateyenu Moferi Adamu is a postgraduate student at the Centre for Entrepreneurship and Small Enterprise Development, University of Cape Coast.

Mr. Mateyenu Moferi Adamu is writing his thesis on the topic, "Electronic Commerce Adoption and Performance of Small-scale Fashion Designing Enterprises in the Kumasi Metropolis of Ghana. The Moderating Role of Firm Size".

We would be grateful if you could extend to him the necessary support.

You may contact him via mateyenu.adamu@stu.ucc.edu.gh or 0540847734.

Thank you.

Yours faithfully,

Prof. (Mrs.) Rosemond Boohene
**DIRECTOR**

UNLEASHING CREATIVITY AND INNOVATION FOR JOB CREATION

**APPENDIX C**

**EHICAL CLEARANCE LETER**

# UNIVERSITY OF CAPE COAST

## INSTITUTIONAL REVIEW BOARD SECRETARIAT

TEL: 0558093143 / 0508878309
E-MAIL: irb@ucc.edu.gh
OUR REF: UCC/IRB/A/2016/3320
YOUR REF:
OMB NO: 0990-0279
IORG #: IORG0009096

12TH APRIL, 2022

Mr. Mateyenu Mofori Adamu
Centre for Entrepreneurship and Small Enterprise Development
University of Cape Coast

Dear Mr. Adamu,

**ETHICAL CLEARANCE – ID (UCCIRB/CHLS/2021/81)**

The University of Cape Coast Institutional Review Board (UCCIRB) has granted Provisional Approval for the implementation of your research **Electronic Commerce Adoption and Performance of Small-Scale Fashion Designing Enterprises in the Kumasi Metropolis of Ghana. The Moderating Role of Firm Size.** This approval is valid from 12th April, 2022 to 11th March, 2023. You may apply for a renewal subject to 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 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,

Samuel Asiedu Owusu, PhD
**UCCIRB Administrator**

ADMINISTRATOR
INSTITUTIONAL REVIEW BOARD
UNIVERSITY OF CAPE COAST

**APPENDIX D**

| | E-Commerce adoption | E-commerce* Firm size | Effort expectancy | Enterprise Performance | Facilitating conditions | Firm size | Performance expectancy | Social influence |
|---|---|---|---|---|---|---|---|---|
| DE1 | 0.597 | | | | | | | |
| DE10 | 0.846 | | | | | | | |
| DE11 | 0.796 | | | | | | | |
| DE12 | 0.805 | | | | | | | |
| DE13 | 0.741 | | | | | | | |
| DE14 | 0.743 | | | | | | | |
| DE15 | 0.770 | | | | | | | |
| DE16 | 0.747 | | | | | | | |
| DE2 | 0.629 | | | | | | | |
| DE3 | 0.794 | | | | | | | |
| DE4 | 0.778 | | | | | | | |
| DE5 | 0.624 | | | | | | | |
| DE6 | 0.796 | | | | | | | |
| DE7 | 0.779 | | | | | | | |
| DE8 | 0.774 | | | | | | | |
| DE9 | 0.792 | | | | | | | |
| EE1 | | | 0.709 | | | | | |
| EE2 | | | 0.832 | | | | | |
| EE3 | | | 0.848 | | | | | |
| EE5 | | | 0.827 | | | | | |
| FC1 | | | | | 0.891 | | | |
| FC2 | | | | | 0.915 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| FC3 | | | | 0.883 | | |
| FC4 | | | | 0.789 | | |
| FP3 | | | 0.806 | | | |
| FP4 | | | 0.842 | | | |
| FP5 | | | 0.825 | | | |
| FP6 | | | 0.868 | | | |
| FP7 | | | 0.883 | | | |
| FP8 | | | 0.838 | | | |
| FP9 | | | 0.864 | | | |
| PE1 | | | | | | 0.808 |
| PE2 | | | | | | 0.743 |
| PE3 | | | | | | 0.857 |
| PE4 | | | | | | 0.845 |
| Q2 | | | | | 1.000 | |
| Q2 * DE1 | 0.507 | | | | | |
| Q2 * DE10 | 0.854 | | | | | |
| Q2 * DE11 | 0.690 | | | | | |
| Q2 * DE12 | 0.713 | | | | | |
| Q2 * DE13 | 0.708 | | | | | |
| Q2 * DE14 | 0.695 | | | | | |
| Q2 * DE15 | 0.754 | | | | | |
| Q2 * DE16 | 0.718 | | | | | |
| Q2 * DE2 | 0.588 | | | | | |
| Q2 * DE3 | 0.827 | | | | | |
| Q2 * DE4 | 0.708 | | | | | |
| Q2 * DE5 | 0.732 | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Q2 * DE6 | 0.834 | | | | | | |
| Q2 * DE7 | 0.793 | | | | | | |
| Q2 * DE8 | 0.665 | | | | | | |
| Q2 * DE9 | 0.721 | | | | | | |
| SI1 | | | | | | | 0.894 |
| SI2 | | | | | | | 0.929 |
| SI3 | | | | | | | 0.908 |
| SI4 | | | | | | | 0.840 |

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