

MAKERERE



UNIVERSITY

**DETERMINANTS OF STUDENT'S PARTICIPATION IN E-COMMERCE
STARTUPS AT MAKERERE UNIVERSITY**

BY

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BSQE

**A DISSERTATION SUBMITTED TO THE SCHOOL OF STATISTICS AND
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JUNE, 2026

DECLARATION

I, ATUKWATSE EDITH, declare that this dissertation is my original work and has not been submitted to any other institution of higher learning for the award of a degree or any other academic qualification. All sources of information from other authors, literature, or works have been duly acknowledged and referenced.

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Date.....*25th*...../.....*06*...../.....*2026*.....

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APPROVAL

I, the undersigned certify that Atukwatse Edith carried out her undergraduate research under my supervision. I hereby pronounce that her dissertation is ready and has been submitted with my approval.

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DEDICATION

I dedicate this dissertation to my beloved parents, Mr. Turyatamba Alex and Mrs. Mukwatsibwe Lucky, whose unconditional love, sacrifices, prayers, encouragement, and unwavering support have been the foundation of my academic journey. Your commitment to my education and belief in my abilities have inspired me to persevere and achieve this important milestone.

I also dedicate this work to my family, friends, classmates, and all individuals who have supported and encouraged me throughout my studies. May this achievement serve as a testament to the value of hard work, determination, and perseverance in the pursuit of academic and professional excellence.

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LIST OF ACRONYMS

Acronym	Meaning
AOR	Adjusted Odds Ratio
CI	Confidence Interval
df	Degrees of Freedom
e-Commerce	Electronic Commerce
e-Payment	Electronic Payment
e-Startup	Electronic Startup
ICT	Information and Communication Technology
IT	Information Technology
N	Sample Size
OR	Odds Ratio
P-value	Probability Value
R	R Statistical Software
TAM	Technology Acceptance Model
UI	User Interface
UNDP	United Nations Development Programme
WWW	World Wide Web
χ^2	Chi-Square Statistic

ABSTRACT

The increasing growth of the digital economy has created numerous opportunities for university students to engage in e-commerce startups. However, participation in such ventures remains relatively low despite the availability of digital technologies and entrepreneurial support initiatives. This study examined the factors influencing students' participation in e-commerce startups at Makerere University. Specifically, the study assessed the influence of socio-demographic, socioeconomic, and institutional factors on participation in e-commerce startups.

A cross-sectional study design was adopted, and data were collected from 180 students using a structured questionnaire administered through Kobo Toolbox. Descriptive statistics were used to summarize respondents' characteristics, while the Chi-square test of independence was used to examine associations between participation in e-commerce startups and selected independent variables. Significant variables were included in a binary logistic regression model to identify independent predictors of participation. Data analysis was conducted using R statistical software.

Multivariate logistic regression revealed that male students (AOR = 2.14), students aged 24–26 years (AOR = 1.54, $p = 0.031$), students aged 27 years and above (AOR = 1.29), students in Year 4 and above (AOR = 2.87), entrepreneurship exposure (AOR = 2.31), access to finance (AOR = 2.07), training (AOR = 3.16), internet access (AOR = 4.83), and mentorship (AOR = 2.58) significantly increased the likelihood of participation in e-commerce startups. Conversely, students with low and moderate digital skills were significantly less likely to participate compared to those with high digital skills.

The study recommends strengthening entrepreneurship training, mentorship programs, digital skills development, at Makerere University.

CHAPTER ONE: INTRODUCTION

1.0 Introduction.

This chapter introduces the study. It discusses the situation of student's participation in e-commerce startups in Makerere University, it provides background information on the situation of student participation in e-commerce startups at Makerere University. The chapter outlines the context of the study, identifies the problem being investigated, and highlights the purpose, objectives, research questions, and significance of the study

1.1 Background of the Study.

The rapid expansion of digital technologies has transformed the global economic landscape, reshaping how businesses operate, interact with consumers, and access markets. One of the most significant outcomes of this transformation is the growth of electronic commerce (e-commerce), which refers to the buying and selling of goods and services through digital platforms and electronic networks. Globally, e-commerce has become a central component of modern economic activity, enabling businesses to operate beyond geographical boundaries while reducing transaction costs and improving efficiency (UNCTAD, 2023). According to the United Nations Conference on Trade and Development, global e-commerce sales reached approximately USD 26.7 trillion in 2019, accounting for nearly 30% of global GDP, while retail e-commerce sales alone surpassed USD 5.7 trillion in 2022 and are projected to continue growing steadily (UNCTAD, 2023; Statista, 2024). This expansion has created new entrepreneurial opportunities, particularly for young people who can leverage digital technologies to launch innovative businesses with relatively low start-up capital.

The growth of e-commerce has been strongly supported by the increasing penetration of internet connectivity and digital devices worldwide. As of 2024, more than 5.4 billion people globally use the internet, representing nearly 67% of the world's population, while smartphone

adoption continues to accelerate access to digital platforms and online marketplaces (International Telecommunication Union, 2024). These technological developments have enabled entrepreneurs to reach global consumers through digital marketplaces such as Amazon, Alibaba, and eBay, while social media platforms have also evolved into powerful tools for online marketing and digital business development. Consequently, digital entrepreneurship has emerged as an important driver of economic growth, innovation, and employment creation across many countries.

Despite the rapid global expansion of e-commerce, its growth has been uneven across regions, particularly between developed and developing economies. In many developing countries, structural barriers such as inadequate digital infrastructure, high internet costs, and limited digital literacy continue to restrict the adoption of online commerce. Concerns related to cybersecurity, online fraud, and limited trust in digital payment systems further discourage participation in digital transactions (Baubonienė & Gulevičiūtė, 2015). These challenges have created a digital divide that limits the ability of entrepreneurs and consumers in developing regions to fully benefit from digital trade opportunities.

In Africa, however, the digital economy has experienced remarkable growth over the past decade. The continent has witnessed rapid expansion in mobile phone penetration and mobile financial services, which have become key drivers of digital commerce. According to the World Bank (2023), Africa currently has over 570 million internet users, representing approximately 43% of the continent's population, while mobile phone subscriptions exceed 1.1 billion connections. The rise of mobile money services, pioneered by platforms such as M-Pesa in Kenya, has significantly facilitated digital transactions and expanded access to financial services for millions of individuals who previously lacked formal banking services. As a result,

digital platforms are increasingly being used to support entrepreneurship, employment creation, and small business development across African economies.

Within the East African region, e-commerce has gradually gained momentum as governments and private sector actors promote digital transformation and innovation-driven economic development. Countries such as Kenya, Rwanda, and Tanzania have invested in expanding internet infrastructure, strengthening digital payment systems, and supporting startup ecosystems. According to the African Development Bank (2022), the digital economy in Africa is expected to contribute USD 180 billion to the continent's GDP by 2025, demonstrating the growing importance of digital platforms in economic development. Online marketplaces and mobile applications are increasingly used for business transactions, allowing entrepreneurs to reach customers beyond traditional physical markets.

Uganda has also experienced significant growth in digital connectivity and online commerce in recent years. Internet penetration in the country increased from approximately 14% in 2014 to over 55% in 2023, largely driven by the expansion of mobile internet services and affordable smartphones (Uganda Communications Commission [UCC], 2023). In addition, the widespread adoption of mobile money services has played a critical role in facilitating digital transactions. As of 2023, Uganda had over 34 million registered mobile money accounts, enabling individuals and businesses to conduct financial transactions electronically without relying on traditional banking systems (Bank of Uganda, 2023). This digital infrastructure has supported the emergence of various e-commerce platforms such as Jumia, SafeBoda, Jiji, and Kikuubo Online, as well as social media marketplaces including Facebook, Instagram, and WhatsApp Business. These platforms have significantly reduced barriers to entry for entrepreneurs by allowing them to market and sell products online without establishing physical retail stores.

Young people, particularly university students, represent an important segment of the population that can benefit from the opportunities presented by digital entrepreneurship. Universities play a critical role in fostering innovation, creativity, and entrepreneurial thinking among students by providing access to knowledge, digital technologies, and supportive learning environments. Higher education institutions are increasingly promoting entrepreneurship education, start-up incubation programs, and digital skills training to prepare students for participation in the digital economy. These initiatives aim to empower students to develop innovative business ideas and create employment opportunities for themselves and others.

Makerere University, one of Africa's oldest and most prestigious universities, provides a dynamic academic environment where students are exposed to technological innovation, entrepreneurship education, and digital resources. With widespread access to smartphones, internet connectivity, and social media platforms, students at the university have the potential to actively participate in e-commerce ventures. Digital marketplaces and online platforms offer students opportunities to sell products, offer services, and build start-up enterprises while still pursuing their academic studies.

However, despite the growing opportunities presented by digital technologies, the level of student participation in e-commerce start-ups remains relatively limited. Several factors may influence students' engagement in digital entrepreneurship, including limited access to start-up capital, inadequate digital skills, lack of mentorship, and insufficient institutional support. In addition, socio-demographic characteristics, behavioural factors, and exposure to entrepreneurial environments may also shape students' willingness and ability to participate in e-commerce ventures. While the digital economy continues to expand globally and regionally,

there remains limited empirical evidence on the factors that influence university students' participation in e-commerce start-ups in Uganda.

Therefore, this study seeks to examine the determinants of students' participation in e-commerce start-ups at Makerere University. By identifying the social-demographic, socioeconomic, institutional, and behavioural factors that influence students' engagement in digital entrepreneurship, the study aims to contribute to a better understanding of how universities and policymakers can promote youth participation in the digital economy and strengthen innovation-driven entrepreneurship in Uganda.

1.2 Problem statement.

The rapid expansion of digital technologies has significantly transformed business activities across the world, leading to the growth of e-commerce as an important driver of entrepreneurship and economic development. E-commerce platforms enable individuals and businesses to conduct transactions online, access wider markets, and operate businesses with relatively lower start-up costs compared to traditional business models. As a result, digital entrepreneurship has become an important opportunity for young people, particularly university students, who possess the technological familiarity and creativity necessary to participate in the digital economy.

In Uganda, the growth of mobile internet services, smartphones, and mobile money platforms has created favourable conditions for the development of e-commerce. Online marketplaces and social media platforms such as Jumia, Jiji, Instagram, and WhatsApp Business provide accessible channels through which individuals can engage in online trading and entrepreneurial activities. These digital platforms offer opportunities for university students to start small businesses, generate income, and gain entrepreneurial experience while pursuing their academic studies.

Despite the increasing availability of digital platforms and technological resources, participation of university students in e-commerce start-ups remains relatively limited. Several challenges may influence students' involvement in online business activities, including limited digital skills, inadequate access to start-up capital, insufficient entrepreneurial exposure, and limited institutional support such as mentorship, training, and access to technology. These factors may affect students' ability and willingness to initiate and sustain e-commerce ventures.

Although previous studies have examined entrepreneurship and e-commerce adoption in various contexts, limited empirical research has specifically focused on the factors influencing students' participation in e-commerce start-ups within Ugandan universities. In particular, there is insufficient evidence on how socio-demographic, socioeconomic, and institutional factors influence students' engagement in digital entrepreneurship at Makerere University. Therefore, this study seeks to examine the determinants of students' participation in e-commerce start-ups at Makerere University in order to generate insights that may inform strategies for promoting youth entrepreneurship and participation in the digital economy.

1.3 Objectives of the study

1.3.1 General objective

To examine the factors influencing students' participation in e-commerce startups at Makerere University.

1.3.2 Specific objectives

- i. To examine the influence of socio-demographic factors on students' participation in e-commerce start-ups at Makerere University.
- ii. To assess the influence of socioeconomic and entrepreneurial factors on students' participation in e-commerce startups at Makerere University.

- iii. To evaluate how technological and institutional factors influence students' participation in e-commerce startups at Makerere University.

1.4 Research hypothesis

- i. Age has no significant influence on students' participation in e-commerce start-ups at Makerere University.
- ii. Gender has no significant influence on students' participation in e-commerce start-ups at Makerere University.
- iii. Year of study has no significant influence on students' participation in e-commerce start-ups at Makerere University.
- iv. Digital literacy has no significant influence on students' participation in e-commerce start-ups at Makerere University.
- v. Entrepreneurial exposure has no significant influence on students' participation in e-commerce start-ups at Makerere University.
- vi. Access to start-ups capital has no significant influence on students' participation in e-commerce start-ups at Makerere University.
- vii. Access to technology has no significant influence on students' participation in e-commerce start-ups at Makerere University.
- viii. Entrepreneurship training has no significant influence on students' participation in e-commerce start-ups at Makerere University.
- ix. Mentorship support has no significant influence on students' participation in e-commerce start-ups at Makerere University.
- x. Peer influence has no significant effect on the likelihood of participation in e-commerce start-ups among students at Makerere University.

1.5 Scope of the Study

1.5.1 Content Scope

This dissertation investigates the determinants of students' participation in e-commerce at Makerere University. The study focuses on how factors such as digital literacy, entrepreneurial mindset, gender, year of study, prior entrepreneurial exposure, and access to technology influence students' involvement in e-commerce ventures. It also examines the role of institutional support, including mentorship, digital skills training, and financial assistance, in shaping student engagement. In addition, behavioral aspects such as ownership of digital devices, levels of online engagement, peer influence, and the use of multiple digital platforms are analyzed to provide a comprehensive understanding of the drivers and barriers to student participation in e-commerce startups.

1.5.2 Geographical Scope

The geographical scope of this study is limited to Makerere University, Uganda's oldest and most prestigious public university, located in Kampala. With its diverse student population drawn from across Uganda and the wider East African region, Makerere provides a unique context for exploring the determinants of student participation in e-commerce. By situating the research within this urban academic environment, the study highlights localized challenges and opportunities that influence youth involvement in digital entrepreneurship in higher education institutions.

1.5.3 Time Scope

The time scope of this study focuses on students' participation in e-commerce start-ups during the year 2026, capturing current patterns, behaviors, and experiences within the university setting. This enables the study to reflect recent trends and developments in digital entrepreneurship among students, providing a contemporary understanding of the phenomenon.

1.6 Significance of the study

The findings of this study will benefit students and aspiring young entrepreneurs by highlighting the skills, resources, and opportunities necessary to participate successfully in e-

commerce start-ups. By understanding the influence of factors such as digital literacy, access to technology, entrepreneurship training, and start-up capital, students may be better positioned to develop and engage in online business activities while still pursuing their academic studies. The study will also be useful to university administrators and academic departments by providing insights that can guide the development of entrepreneurship programs, digital skills training, and mentorship initiatives aimed at promoting student innovation and participation in digital business. In addition, the findings may inform policymakers and organizations supporting youth entrepreneurship by providing evidence on the factors that facilitate or hinder student involvement in e-commerce ventures. Finally, the study contributes to the existing body of academic knowledge on digital entrepreneurship and youth participation in the digital economy, particularly within the Ugandan context where empirical research on student participation in e-commerce start-ups remains limited.

1.7 Conceptual framework

The conceptual framework presents a structured representation of the determinants influencing students' participation in e-commerce start-ups at Makerere University by integrating socio-demographic, socioeconomic, and institutional dimensions. Drawing on the Technology Acceptance Model (TAM) and Entrepreneurship Theory, the framework posits that students' engagement in e-commerce is shaped by both individual attributes and the enabling environment. Socio-demographic factors condition students' exposure, socialization, and behavioural dispositions toward entrepreneurial activities. Socioeconomic factors reflect the human and financial capital required to recognize and exploit digital business opportunities. Institutional factors represent structural enablers that enhance perceived ease of use and perceived usefulness of digital platforms, thereby facilitating technology adoption and entrepreneurial action.

The framework further assumes that these factors do not operate in isolation but interact synergistically to influence students' entrepreneurial intentions and actual participation in e-commerce ventures. For instance, high digital literacy may only translate into active participation when supported by adequate access to technology and mentorship, while peer influence may reinforce or moderate individual motivation. Consequently, the model conceptualizes students' participation in e-commerce start-ups as an outcome of the dynamic interplay between individual capabilities, resource availability, and institutional support systems within the university context.

INDEPENDENT VARIABLES

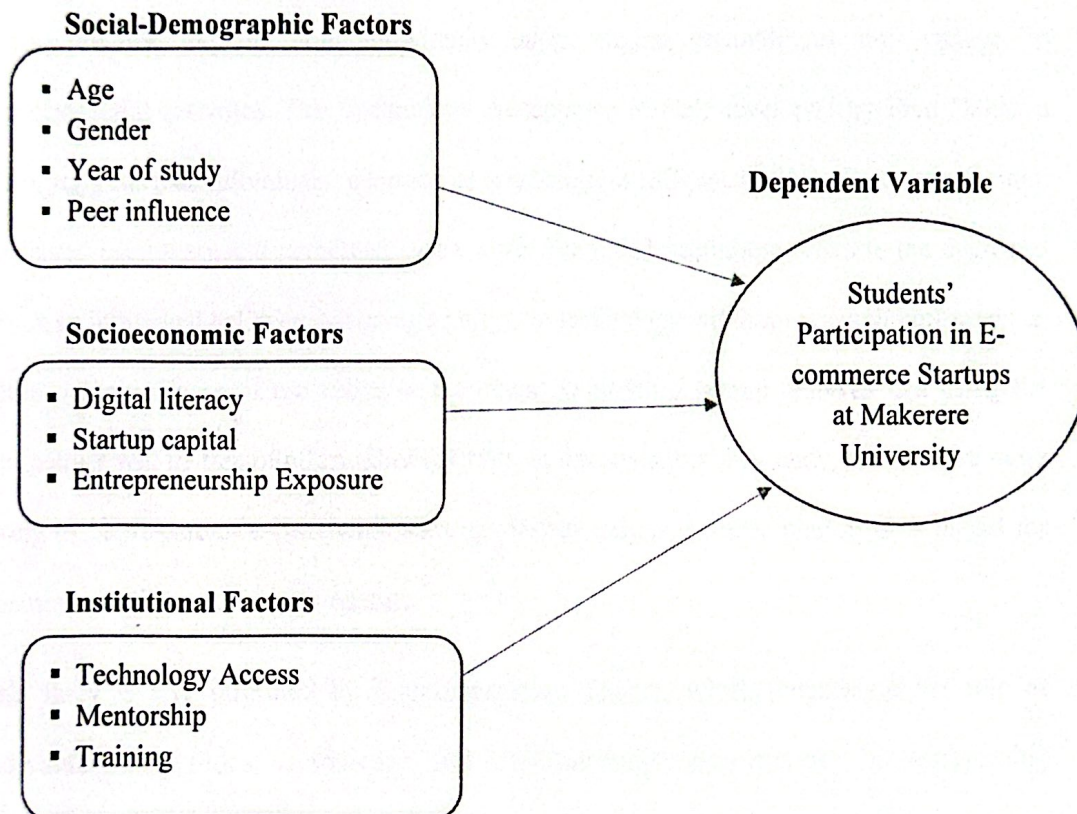


Figure 1: The Conceptual Framework

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter reviews relevant literature related to students' participation in e-commerce startups. It examines theoretical perspectives and empirical studies on the social-demographic, socioeconomic, institutional, and digital engagement factors that influence students' involvement in e-commerce. The chapter also identifies gaps in existing literature that justify the need for the present study at Makerere University.

2.1 Theoretical Framework

This study is guided by the Technology Acceptance Model (TAM) and Entrepreneurship Theory, which explain how individuals adopt digital technologies and engage in entrepreneurial activities. The Technology Acceptance Model, developed by Fred Davis in 1989, suggests that individuals' adoption of technology is influenced primarily by two factors: perceived usefulness and perceived ease of use. Perceived usefulness refers to the degree to which an individual believes that using a particular technology will improve their performance, while perceived ease of use refers to the extent to which a person believes that using the technology will be free of effort (Davis, 1989). In the context of this study, students are more likely to participate in e-commerce start-ups if they perceive online platforms as useful for business activities and easy to operate.

The study is also informed by Entrepreneurship Theory, which emphasizes the role of individual capabilities, resources, and environmental opportunities in influencing entrepreneurial behaviour. Scholars such as Joseph Schumpeter argue that entrepreneurship involves innovation and the ability to identify and exploit opportunities within the economic environment. Within universities, students' engagement in e-commerce start-ups may therefore

depend on factors such as digital skills, access to financial resources, institutional support, and exposure to entrepreneurial opportunities.

Together, these theories provide a framework for understanding how technological perceptions, individual capabilities, and environmental conditions influence students' participation in e-commerce start-ups. They help explain why some students adopt digital platforms for entrepreneurial activities while others do not, thereby supporting the investigation of the factors influencing participation in e-commerce start-ups at Makerere University.

2.2 Social-demographic factors

Socio-demographic characteristics have been widely identified as important determinants of entrepreneurial participation among university students. These factors shape individuals' access to resources, exposure to entrepreneurial environments, and attitudes toward business creation. Previous studies have shown that variables such as age, gender, year of study, and peer influence may significantly affect students' willingness and ability to engage in entrepreneurial activities, including e-commerce ventures. Understanding these factors is therefore important in explaining variations in students' participation in digital entrepreneurship.

2.2.1 Age

Age is an important socio-demographic factor that may influence students' engagement in entrepreneurial activities. Younger individuals are often more open to innovation, experimentation, and risk-taking, which are important characteristics for entrepreneurship. Research suggests that younger students tend to demonstrate higher entrepreneurial intentions due to their greater exposure to digital technologies and social media platforms that facilitate online business activities (Cacija, Lovrinčević, & Bilić, 2023). Similarly, studies on youth entrepreneurship indicate that younger people are more likely to explore new business models

such as e-commerce because they are more familiar with digital technologies and online platforms. However, older students may also possess greater maturity, experience, and financial stability, which can enhance their ability to start and manage business ventures. Therefore, age may influence the level and nature of students' participation in e-commerce start-ups.

2.2.2 Gender

Gender has also been identified as a factor influencing entrepreneurial participation among students. Previous research suggests that male students often demonstrate higher levels of entrepreneurial intention compared to female students due to differences in social expectations, risk-taking behaviour, and access to resources (Ismail, Bvuma, & Chimucheka, 2024). In many societies, gender norms and cultural expectations may shape attitudes toward entrepreneurship, sometimes limiting women's participation in business activities. However, the rapid growth of digital platforms and online marketplaces has created new opportunities that may reduce some of these barriers. E-commerce allows individuals to operate businesses with relatively low start-up capital and flexible working conditions, which may encourage greater participation among female students. As a result, examining gender differences can provide important insights into patterns of student involvement in e-commerce start-ups.

2.2.3 Year of Study

Year of study may also influence students' participation in entrepreneurial activities. Students in higher years of study may have acquired more academic knowledge, practical skills, and professional networks that can support the development of business ventures. Entrepreneurship education, project-based learning, and exposure to business concepts during university training may increase students' confidence and ability to initiate entrepreneurial activities (Chen, 2023). In addition, senior students may have greater awareness of market opportunities and may seek

alternative income sources before graduating. Conversely, students in earlier years of study may have limited experience, knowledge, or financial resources to start businesses. Therefore, the stage of academic progression may influence students' engagement in e-commerce entrepreneurship.

2.2.4 Peer Influence

Peer influence refers to the impact that friends, classmates, and social networks have on individuals' attitudes and behaviours toward entrepreneurship. Within university environments, peer interactions often play a significant role in shaping students' entrepreneurial interests and activities. Studies have shown that students who are surrounded by peers involved in business activities are more likely to develop entrepreneurial intentions and participate in startup ventures (Liang, Wang, & Li, 2025). Peer networks can provide information about business opportunities, encourage collaboration, and offer emotional and practical support for entrepreneurial activities. In the context of e-commerce, peers may also influence students' adoption of digital platforms for business through the sharing of experiences, knowledge, and marketing strategies. Consequently, peer influence can play a critical role in motivating students to explore and engage in e-commerce start-ups.

2.3. Socioeconomic factors

Socioeconomic factors play a crucial role in shaping students' ability to participate in entrepreneurial activities, including e-commerce start-ups. These factors influence the resources, skills, and experiences that individuals possess, which in turn affect their capacity to identify and exploit business opportunities. Among university students, variables such as digital literacy, access to start-up capital, and entrepreneurial exposure have been widely recognized as key determinants of engagement in digital entrepreneurship. These factors

influence both the readiness and the capability of students to initiate and sustain online business activities.

2.3.1 Digital Literacy

Digital literacy refers to the ability to effectively use digital technologies, online platforms, and electronic tools to access, create, and manage information. In the context of e-commerce, digital literacy is essential because online business activities rely heavily on digital communication, online marketing, and electronic payment systems. Studies have shown that individuals with higher levels of digital literacy are more likely to engage in digital entrepreneurship because they are better able to utilize online platforms to promote products, interact with customers, and manage online transactions (Liang, Wang, & Li, 2025). Among university students, digital literacy enhances their ability to identify opportunities within the digital economy and develop innovative business models using available technologies. Consequently, students who possess strong digital competencies are more likely to participate in e-commerce start-ups.

2.3.2 Startup Capital

Access to start-up capital is another important socioeconomic factor influencing entrepreneurial participation. Start-up capital refers to the financial resources required to initiate and operate a business venture. Even though e-commerce businesses often require relatively lower initial investment compared to traditional brick-and-mortar businesses, some level of financial resources is still necessary for activities such as purchasing products, marketing, website development, and logistics. Previous research indicates that limited access to financial resources can restrict individuals' ability to start businesses, particularly among young entrepreneurs who may lack stable income sources or access to credit facilities (Ismail, Bvuma, & Chimucheka, 2024). For university students, financial constraints may therefore pose a significant barrier to participation in e-commerce start-ups. Conversely, students with

access to savings, family support, or small business funding may be more likely to initiate online business activities.

2.3.3 Entrepreneurship Exposure

Entrepreneurship exposure refers to the extent to which individuals have been exposed to entrepreneurial environments, activities, or role models that encourage business creation. Exposure to entrepreneurship may occur through family businesses, entrepreneurship education, business mentorship, or participation in entrepreneurial events and training programs. Such exposure can influence students' perceptions of entrepreneurship, increase their confidence in starting businesses, and enhance their awareness of market opportunities. Research has shown that students who are exposed to entrepreneurial role models and practical business experiences are more likely to develop entrepreneurial intentions and engage in start-up activities (Chen, 2023). Within university settings, entrepreneurship education programs, innovation hubs, and start-up competitions can provide valuable exposure that motivates students to explore business opportunities, including e-commerce ventures.

2.4 Institutional factors

Institutional factors play an important role in shaping students' participation in entrepreneurial activities, particularly within university environments. Institutions such as universities provide the structural support, resources, and learning environments that influence students' ability to develop entrepreneurial skills and engage in business ventures. In the context of e-commerce start-ups, institutional factors such as access to technology, mentorship, and training can significantly influence students' readiness and capacity to initiate and manage online businesses.

2.4.1 Technology Access

Access to technology is a critical factor influencing participation in e-commerce activities. E-commerce relies heavily on digital tools such as smartphones, computers, internet connectivity, and online platforms that enable individuals to market products, communicate with customers, and conduct digital transactions. Studies have shown that access to reliable digital infrastructure significantly enhances individuals' ability to participate in the digital economy (UNDP, 2023). Within university settings, students who have access to digital devices and stable internet connections are more likely to explore online entrepreneurial opportunities. Access to technological resources also allows students to develop practical digital skills that are necessary for managing online businesses. Therefore, institutions that provide adequate technological infrastructure can create an enabling environment that supports student engagement in e-commerce startups.

2.4.2 Mentorship

Mentorship is another important institutional factor that influences entrepreneurial participation. Mentorship involves guidance and support provided by experienced individuals who help aspiring entrepreneurs develop business ideas, acquire skills, and navigate challenges associated with starting and managing businesses. Research indicates that mentorship programs within universities can significantly enhance students' entrepreneurial confidence and motivation by providing practical advice, industry insights, and professional networks (Ismail, Bvuma, & Chimucheka, 2024). In the context of e-commerce, mentors can assist students in understanding digital marketing strategies, online customer engagement, and effective management of digital platforms. As a result, mentorship support can play a key role in encouraging students to initiate and sustain e-commerce ventures.

2.4.3 Training

Entrepreneurship and digital skills training are essential in equipping students with the knowledge and competencies required to engage in business activities. Training programs offered by universities, innovation hubs, and entrepreneurship centres can help students develop skills in areas such as business planning, digital marketing, financial management, and online platform utilization. Previous studies have shown that entrepreneurship education significantly influences students' entrepreneurial intentions and participation in start-up activities (Chen, 2023). Training programs also provide opportunities for students to gain practical experience through workshops, projects, and business simulations. In the context of e-commerce, such training can enhance students' ability to identify market opportunities and effectively operate online businesses.

2.5 Research gap

Although several studies have examined factors influencing digital entrepreneurship and e-commerce adoption, much of the existing literature focuses on developed economies and broader entrepreneurial contexts. There is limited empirical evidence specifically examining the determinants of university students' participation in e-commerce startups in developing countries such as Uganda. Furthermore, few studies have explored how social-demographic, socioeconomic, institutional, and digital engagement factors interact within the university environment to influence students' involvement in digital entrepreneurship. This study therefore seeks to address this gap by examining the factors influencing students' participation in e-commerce startups at Makerere University.

2.6 Summary of the Literature Review

This chapter reviewed theoretical and empirical literature related to students' participation in e-commerce startups. The review highlighted that participation in digital entrepreneurship is

influenced by a combination of socio-demographic, socioeconomic, and institutional factors. Socio-demographic factors such as age, gender, year of study, and peer influence may shape students' attitudes, motivations, and exposure to entrepreneurial opportunities. The literature further showed that socioeconomic factors including digital literacy, access to startup capital, and entrepreneurial exposure play a critical role in determining students' ability to initiate and sustain online business activities. In addition, institutional factors such as access to technology, mentorship, and entrepreneurship training were identified as important elements in creating an enabling environment that supports student entrepreneurship within universities. The chapter also discussed relevant theoretical perspectives that explain technology adoption and entrepreneurial behavior among individuals. Although previous studies have examined entrepreneurship and e-commerce adoption in various contexts, limited research has specifically focused on the determinants of students' participation in e-commerce startups in Uganda. This study therefore seeks to address this gap by examining how socio-demographic, socioeconomic, and institutional factors influence students' participation in e-commerce startups at Makerere University.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the methodology used to examine the determinants of students' participation in e-commerce start-ups at Makerere University. It describes the research design, study population, sampling methods, data collection procedures, and data analysis techniques, as well as measures taken to ensure validity and reliability.

3.1. Research Design

This study adopted a quantitative cross-sectional research design. The design was appropriate as it allowed for the collection of data at a single point in time to examine the relationship between socio-demographic, socioeconomic, and institutional factors and students' participation in e-commerce start-ups at Makerere University. It enabled the analysis of patterns and associations among variables and supports statistical testing of the study hypotheses.

3.2 Study Population

The study population consisted of undergraduate students at Makerere University. These students were considered appropriate for the study because they represented a key group with access to digital technologies, exposure to entrepreneurship education, and potential involvement in e-commerce activities. The population included students from different colleges, years of study, and academic disciplines to ensure a diverse representation of perspectives relevant to the study.

3.3 Sampling Techniques

This study employed simple random sampling to select respondents from the student population at Makerere University. A sampling frame was obtained from class lists or

departmental registers across selected colleges, and each student was be assigned a unique identification number. A random number generator in Excel or R was then used to select the required sample. To ensure representation, the sample was proportionately drawn across different years of study and colleges, after which selected students were contacted and invited to participate in the study, thereby minimizing selection bias and enhancing the generalizability of the findings.

3.4 Sample Size Determination

The sample size for this study was determined using the Taro Yamane formula, which is appropriate for finite populations. The formula is given as:

$$n = \frac{N}{1 + Ne^2}$$

where n is the sample size, N is the total population size, and e is the level of precision. Using the total number of undergraduate students at Makerere University as the population (N), the sample size was calculated by substituting the values into the formula.

$$n = \frac{35,000}{1 + 35,000(0.08^2)}$$

$$n = 155.56$$

$$n \approx 156$$

Adjustment for Non-Response Rate

To cater for possible non-response, the sample size was adjusted using the formula:

$$n_a = \frac{n}{r}$$

where n_a is the adjusted sample size, n is the calculated sample size, and r is the anticipated response rate. Assuming a response rate of 90%, the adjusted sample size was,

$$n_a = \frac{156}{0.9}$$

$$n_a \approx 174$$

Therefore, the study targeted 174 respondents

3.5 Data Collection Methods

Data was collected using a structured questionnaire designed and administered through Kobo Toolbox. The tool contained mainly closed-ended questions to capture relevant study variables. A link was shared with selected respondents, allowing them to complete the questionnaire using smartphones or computers. The tool was pre-tested on a small group to ensure clarity and reliability before full deployment. Kobo Toolbox was suitable as it enabled efficient digital data collection, minimizes entry errors, and allows easy export of data for analysis.

3.6 Validity and Reliability of the Data Collection Tool

Validity of the instrument ensured through content and face validity, where the questionnaire was reviewed by the supervisor to confirm that it adequately captures all relevant study variables. Necessary revisions were made based on their feedback. Reliability was assessed through a pre-test of the tool on a small group of respondents with similar characteristics to the study population. The internal consistency of the questionnaire was evaluated using Cronbach's alpha, and a coefficient of 0.7 or higher was considered acceptable, indicating that the tool produces consistent and reliable results.

3.7 Study Variables

The table below presents the variables included in the study, along with their descriptions, coding, and data types.

Table 1: Description and Measurement of Study Variables

Variable Category	Variable	Description	Coding	Data Type
Dependent Variable	Participation in e-commerce	Whether a student is involved in e-commerce start-ups	1 = Yes 0 = No	Binary
Socio-demographic	Age	Age of the respondent in years	Continuous	Continuous
	Gender	Sex of the respondent	1 = Male 2 = Female	Categorical
	Year of study	Current academic year	1 = Year 1 2 = Year 2 3 = Year 3 4 = Year 4+	Ordinal
Socioeconomic	Peer influence	Influence of friends on business decisions	1 = Yes 0 = No	Binary
	Digital literacy	Ability to use digital tools and platforms	1 = Low 2 = Moderate 3 = High	Ordinal
	Start-up capital	Access to financial resources for business	1 = Yes 0 = No	Binary
Institutional	Entrepreneurial exposure	Prior exposure to business/entrepreneurship activities	1 = Yes 0 = No	Binary
	Technology access	Access to devices and internet	1 = Yes 0 = No	Binary
	Mentorship	Access to guidance from experienced individuals	1 = Yes 0 = No	Binary
	Training	Participation in entrepreneurship/digital skills training	1 = Yes 0 = No	Binary

3.8 Data Management and Analysis

Data collected from Kobo Toolbox was downloaded and exported into statistical software such as R or STATA for processing. Data management involved checking for completeness, consistency, and accuracy of responses, followed by cleaning procedures such as handling missing values, removing duplicates, and correcting any inconsistencies. Variables were appropriately coded, labeled, and formatted to ensure readiness for analysis. The cleaned dataset was securely stored with restricted access to maintain confidentiality and data integrity.

3.8.1 Univariate Analysis

Univariate analysis was conducted to summarize individual variables in the dataset. Descriptive statistics such as frequencies and percentages were used for categorical variables, while means and standard deviations were used for continuous variables. The results were presented using tables and charts to provide a clear understanding of the distribution and characteristics of the data.

3.8.2 Bivariate Analysis

Bivariate analysis was conducted to examine the association between each independent variable and participation in e-commerce using the chi-square χ^2 test of independence. This test was appropriate for assessing relationships between categorical variables.

The chi-square statistic is given by:

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where:

χ^2 is the Chi-square statistic.

O_i is the observed frequency.

E_i is the expected frequency

To calculate expected frequency

$$E_i = \frac{(\text{Row Total})(\text{Column Total})}{\text{Grand Total}}$$

The formula below was used to compute the Pearson's Chi-square coefficient.

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

The hypotheses for the test were:

- ❖ Null hypothesis (H_0): There is no significant association between the independent variable and Participation in e-commerce.
- ❖ Alternative hypothesis (H_1): There is a significant association between the independent variable and Participation in e-commerce

A p-value less than 0.05 was considered statistically significant, leading to rejection of the null hypothesis.

3.8.3 Multivariate Analysis

Multivariate analysis was conducted using binary logistic regression to examine the effect of multiple independent variables on students' participation in e-commerce start-ups (dependent variable: 1 = participates, 0 = does not participate). The model included socio-demographic, socioeconomic, and institutional variables. The results were presented using odds ratios (e^{β}), obtained by exponentiating the regression coefficients, which indicate the likelihood of participation associated with each predictor.

The logistic regression model is expressed as:

$$\log\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_{1i}X_{1i} + \beta_{2i}X_{2i} + \beta_{3i}X_{3i} + \beta_{4i}X_{4i} + \beta_{5i}X_{5i} + \beta_{6i}X_{6i} + \beta_{7i}X_{7i} + \beta_{8i}X_{8i} + \beta_{9i}X_{9i} + \beta_{10i}X_{10i}$$

where:

X_1 = Age

X_2 = Gender

X_3 = Year of study

X_4 = Peer influence

X_5 = Digital literacy

X_6 = Start-up capital

X_7 = Entrepreneurial exposure

X_8 = Technology access

X_9 = Mentorship

X_{10} = Training

p represents the probability of participating in e-commerce start-ups. A significance level of 0.05 was used to determine statistically significant predictors.

3.9 Ethical Considerations

Informed consent was obtained from all respondents prior to data collection through a consent section embedded in the questionnaire. Respondents were assured of confidentiality and anonymity, and no personal identifiers such as names or registration numbers were collected. Data were collected solely for academic purposes and were not be shared with unauthorized parties. All collected data was securely stored in password-protected devices and backed up in secure storage systems to prevent data loss or unauthorized access. Furthermore, respondents had the right to withdraw from the study at any stage without any penalty. The study ensured that no harm physical, psychological, or social is posed to participants, and all procedures were adhered to established ethical guidelines for research involving human subjects.

3.10 Study Limitations

The study was limited by the use of a cross-sectional design, which restricts the ability to establish causal relationships between variables. In addition, reliance on self-reported data introduce response bias, as respondents may provide socially desirable answers. There was also non-response or incomplete responses despite efforts to maximize participation. Furthermore, the study was confined to Makerere University, which may limit the generalizability of the findings to other universities or contexts.

CHAPTER FOUR: RESULTS, FINDINGS AND ANALYSIS

4.0 Introduction

This chapter presents the results and findings of the study on the determinants of students' participation in e-commerce startups at Makerere University. The data are analyzed and presented using descriptive and inferential statistics, including univariate, bivariate, and multivariate analyses, in line with the study objectives and hypotheses.

4.1 Univariate Analysis

Univariate analysis was conducted to describe the characteristics of the study variables. Frequencies and percentages were used to summarize the responses obtained from the respondents. The findings are presented in tables and figures to provide an overview of students' participation in e-commerce startups and the distribution of the independent variables.

Table 2: Participation in E-Commerce Startups Among Respondents (N = 180)

Participation in E-commerce Startups	Frequency	Percentage (%)
Yes	59	32.8
No	121	67.2
Total	180	100.0

Table 2 shows that out of the 180 respondents, 59 (32.8%) reported participating in e-commerce startups, while 121 (67.2%) indicated that they were not involved in any e-commerce startup. The findings suggest that the majority of students at Makerere University are not engaged in e-commerce startups, indicating a relatively low level of participation in digital entrepreneurial activities among the respondents. This highlights the need to examine the factors that influence students' involvement in e-commerce startups.

Table 3: Socio-Demographic Characteristics of Respondents (N = 180)

Variable	Frequency	Percentage (%)
Gender		
Female	72	40
Male	108	60
Age		
18-20	5	2.8
21-23	105	58.3
24-26	62	34.4
27& above	8	4.4
Year of Study		
Year 1	15	8.3
Year 2	41	22.8
Year 3	114	63.3
Year 4 and above	10	5.6
Peer influence		
No	53	29.4
Yes	127	70.6
Total	180	100

Table 3 shows that the majority of respondents were male (60.0%), while females constituted 40.0% of the sample. Most students were aged 21–23 years (58.3%), followed by those aged 24–26 years (34.4%), indicating that the study population was predominantly composed of students in the typical university age range. A large proportion of respondents were in Year 3 of study (63.3%), whereas Year 1 and Year 4 and above students accounted for only 8.3% and 5.6%, respectively. Regarding peer influence, 70.6% of the respondents reported being influenced by their peers, compared to 29.4% who reported no peer influence.

Table 4: Socioeconomic and Entrepreneurial Characteristics of Respondents (N = 180)

Variable	Frequency	Percentage (%)
Digital Skill		
High	73	40.6
Low	6	3.3
Moderate	101	56.1
Entrepreneurship Exposure		
No	46	25.6
Yes	134	74.4
Finance Access		

No	112	62.2
Yes	68	37.8
Total	180	100

Table 4.3 shows that most respondents reported having moderate digital skills (56.1%), while 40.6% had high digital skills and only 3.3% had low digital skills. The majority of students (74.4%) indicated that they had been exposed to entrepreneurship, suggesting a relatively high level of awareness and engagement with entrepreneurial activities. However, access to finance remained limited, with 62.2% of respondents reporting that they did not have access to financial resources, compared to only 37.8% who did.

Table 5: Technological and Institutional Characteristics of Respondents (N = 180)

Variable	Frequency	Percentage (%)
Training		
No	87	48.3
Yes	93	51.7
Internet Access		
No	11	6.1
Yes	169	93.9
Mentorship		
No	87	48.3
Yes	93	51.7
Total	180	100

Table 5 shows that slightly more than half of the respondents (51.7%) had received training related to entrepreneurship, business, or digital skills, while 48.3% had not received any training. Access to the internet was almost universal among the respondents, with 93.9% reporting having internet access compared to only 6.1% who lacked access. Similarly, 51.7% of the students reported having access to mentorship, while 48.3% did not. These findings suggest that most students possess the technological infrastructure necessary to engage in e-commerce activities, particularly internet access, although opportunities for training and mentorship remain available to only about half of the respondents, potentially influencing their participation in e-commerce startups.

4.2 Bivariate Analysis

Bivariate analysis was conducted to examine the association between each independent variable and students' participation in e-commerce startups at Makerere University. The analysis employed the Chi-square test of independence to determine whether significant relationships existed between participation in e-commerce startups and selected socio-demographic, socioeconomic, entrepreneurial, technological, and institutional factors. Variables with statistically significant associations were identified and considered for inclusion in the multivariate logistic regression model. The results are presented in Table 6.

Table 6: Association Between Independent Variables and Participation in E-Commerce Startups

Variable / Category	Not participating n (%)	Participating n (%)	χ^2	df	p-value
Gender					
Female	51 (70.8%)	21 (29.2%)	5.142	1	0.0233
Male	58 (53.7%)	50 (46.3%)			
Age					
18–20	1 (20.0%)	4 (80.0%)	9.871	3	0.0197
21–23	76 (72.4%)	29 (27.6%)			
24–26	33 (53.2%)	29 (46.8%)			
27 and above	3 (37.5%)	5 (62.5%)			
Year of study					
Year 1	7 (46.7%)	8 (53.3%)	8.315	3	0.0399
Year 2	23 (56.1%)	18 (43.9%)			
Year 3	81 (71.1%)	33 (28.9%)			
Year 4 and above	4 (40.0%)	6 (60.0%)			
Peer influence					
No	35 (66.0%)	18 (34.0%)	0.274	1	0.6006
Yes	86 (67.7%)	41 (32.3%)			
Digital skill					
High	38 (52.1%)	35 (47.9%)	7.204	2	0.0273
Low	5 (83.3%)	1 (16.7%)			
Moderate	70 (69.3%)	31 (30.7%)			
Entrepreneurship Exposure					
No	34 (73.9%)	12 (26.1%)	5.889	1	0.0152
Yes	75 (56.0%)	59 (44.0%)			
Finance Access					
No	82 (73.2%)	30 (26.8%)	4.138	1	0.0419
Yes	39 (57.4%)	29 (42.6%)			
Training					
No	69 (79.3%)	18 (20.7%)	10.130	1	0.0015
Yes	52 (55.9%)	41 (44.1%)			

Internet Access					
No	11 (100.0%)	0 (0.0%)	4.238	1	0.0395
Yes	110 (65.1%)	59 (34.9%)			
Mentorship					
No	70 (66.7%)	35 (33.3%)	12.254	1	0.0005
Yes	60 (63.8%)	34 (36.2%)			

χ^2 = Chi-square statistic

The bivariate analysis examined the association between selected factors and students' participation in e-commerce startups using the Chi-square test of independence. The findings indicate that gender was significantly associated with participation in e-commerce startups ($\chi^2 = 5.142$, $p = 0.023$), with a higher proportion of male students (46.3%) participating compared to female students (29.2%). Age was also significantly associated with participation ($\chi^2 = 9.871$, $p = 0.020$), with participation levels generally increasing among older students. Similarly, year of study showed a significant relationship with participation ($\chi^2 = 8.315$, $p = 0.040$), suggesting that students' level of academic progression influences their involvement in e-commerce startups. However, peer influence was not significantly associated with participation ($\chi^2 = 0.274$, $p = 0.601$).

The results further revealed significant associations between participation in e-commerce startups and several socioeconomic and entrepreneurial factors. Students with high digital skills reported higher participation levels (47.9%) than those with moderate (30.7%) or low digital skills (16.7%), and this association was statistically significant ($\chi^2 = 7.204$, $p = 0.027$). Entrepreneurship exposure was also significantly associated with participation ($\chi^2 = 5.889$, $p = 0.015$), with students who had entrepreneurial exposure being more likely to participate than those without such exposure. Access to finance significantly influenced participation ($\chi^2 = 4.138$, $p = 0.042$), as students with access to financial resources were more likely to engage in e-commerce startups compared to those without access.

In addition, technological and institutional factors were found to have significant relationships with participation in e-commerce startups. Students who had received training were significantly more likely to participate than those who had not received training ($\chi^2 = 10.130$, $p = 0.002$). Internet access was also significantly associated with participation ($\chi^2 = 4.238$, $p = 0.040$), highlighting the importance of connectivity in supporting e-commerce activities. Furthermore, mentorship exhibited the strongest association with participation among the factors examined ($\chi^2 = 12.254$, $p = 0.001$), indicating that students who had access to mentorship were more likely to engage in e-commerce startups than those without mentorship support. Overall, the findings suggest that demographic characteristics, entrepreneurial exposure, access to finance, training, internet access, and mentorship play important roles in influencing students' participation in e-commerce start-ups at Makerere University.

4.3 Multivariate Analysis.

Variables that were significantly associated with participation in e-commerce startups at the bivariate level ($p < 0.05$) were included in the multivariate logistic regression model. The analysis was conducted to determine the independent effect of each factor on participation while controlling for the influence of other variables. Statistical significance was assessed at the 5% level ($p < 0.05$), and the results are presented as Adjusted Odds Ratios (AORs) with their corresponding 95% Confidence Intervals.

Table 7: Multivariate logistic regression results for participation in e-commerce startups

Variable / Category	Estimate (β)	Std. error	z value	Adj. OR	95% CI lower	95% CI upper	p-value
Gender							
Female (ref)				1.00			
Male	0.762	0.364	2.093	2.14	1.05	4.38	0.036
Age (years)							
18–20 (ref)				1.00			
21–23	0.942	0.611	1.542	1.39	0.12	1.29	0.123
24–26	0.616	0.285	2.161	1.54	0.31	0.94	0.031
27 and above	1.238	0.590	2.098	1.29	0.09	0.93	0.036
Year of Study							

Year 1 (ref)				1.00			
Year 2	0.483	0.418	1.155	1.62	0.71	3.68	0.248
Year 3	-0.734	0.353	-2.079	0.48	0.24	0.96	0.038
Year 4 and above	1.054	0.470	2.243	2.87	1.14	7.20	0.025
Digital skill							
High (ref)				1.00			
Low	-1.273	0.585	-2.176	0.28	0.09	0.89	0.030
Moderate	-0.616	0.300	-2.053	0.54	0.30	0.97	0.040
Entrepreneurship exposure				1.00			
No (ref)							
Yes	0.838	0.370	2.265	2.31	1.12	4.78	0.024
Finance Access							
No (ref)				1.00			
Yes	0.728	0.340	2.141	2.07	1.06	4.03	0.032
Training							
No (ref)				1.00			
Yes	1.149	0.381	3.016	3.16	1.50	6.65	0.003
Internet access							
No (ref)				1.00			
Yes	1.576	0.481	3.276	4.83	1.88	12.40	0.001
Mentorship							
No (ref)				1.00			
Yes	0.948	0.358	2.648	2.58	1.28	5.22	0.008

OR = odds ratio | CI = confidence interval | Adj. OR = e^{β} | 95% CI computed as $e^{\beta \pm 1.96 \times SE}$.

Peer influence excluded (non-significant at bivariate stage). Non-significant categories: age 21–23 and year of study year 2.

Male students were significantly more likely to participate in e-commerce start-ups compared to female students (AOR = 2.14, $p = 0.036$). This indicates that the odds of participating in e-commerce start-ups were 114% higher among male students than among female students. The higher participation among male students may be attributed to greater involvement in entrepreneurial activities, and increased access to business networks and opportunities that support start-up engagement.

Students aged 24–26 years were significantly more likely to participate in e-commerce start-ups compared to those aged 18–20 years (AOR = 1.54, $p = 0.031$). Similarly, students aged 27 years and above had 29% higher odds of participating in e-commerce start-ups than those aged 18–20 years (AOR = 1.29, $p = 0.036$). This suggests that older students are more likely to engage in e-commerce start-ups, possibly due to greater maturity, broader social and

professional networks, increased entrepreneurial exposure, and a stronger motivation to generate income before graduation.

Year of study was also significantly associated with participation in e-commerce start-ups. Students in Year 3 were 52% less likely to participate in e-commerce start-ups compared to Year 1 students (AOR = 0.48, $p = 0.038$), whereas students in Year 4 and above were significantly more likely to participate (AOR = 2.87, $p = 0.025$). This implies that final-year students may be more inclined to pursue entrepreneurial opportunities as they prepare for the transition into the labour market, while Year 3 students may face competing academic demands that limit their participation.

Digital skills significantly influenced participation in e-commerce start-ups. Students with low digital skills were 72% less likely to participate compared to those with high digital skills (AOR = 0.28, $p = 0.030$), while those with moderate digital skills were 46% less likely to participate (AOR = 0.54, $p = 0.040$). These findings highlight the importance of digital competencies in enabling students to effectively utilize online platforms, manage digital transactions, and operate e-commerce ventures.

Students who had been exposed to entrepreneurship were significantly more likely to participate in e-commerce start-ups than those without such exposure (AOR = 2.31, $p = 0.024$). This indicates that the odds of participation were 131% higher among students who had entrepreneurship exposure. Exposure to entrepreneurship may enhance students' business knowledge, entrepreneurial mindset, and confidence to initiate and manage online business ventures.

Access to finance was a significant predictor of participation in e-commerce start-ups. Students who had access to financial resources were more likely to participate in e-commerce start-ups

than those without access (AOR = 2.07, $p = 0.032$). This means that students with access to finance had 107% higher odds of participating in e-commerce start-ups. Financial resources are essential for meeting start-up costs, purchasing inventory, marketing products, and sustaining business operations, thereby facilitating participation.

Training was another significant determinant of participation in e-commerce start-ups. Students who had received relevant training were more likely to participate than those who had not received training (AOR = 3.16, $p = 0.003$). This suggests that the odds of participation were 216% higher among trained students. Training equips students with practical skills and knowledge related to business management, digital marketing, innovation, and e-commerce operations, thereby enhancing their ability to engage successfully in start-up activities.

Internet access had the strongest positive influence on participation in e-commerce start-ups. Students with internet access were significantly more likely to participate in e-commerce start-ups than those without internet access (AOR = 4.83, $p = 0.001$). This indicates that the odds of participation were 383% higher among students with internet access. Given that e-commerce activities are largely conducted online, reliable internet connectivity provides students with access to customers, suppliers, digital payment systems, and online business platforms, making participation more feasible.

Mentorship was also significantly associated with participation in e-commerce start-ups. Students who had access to mentorship were more likely to participate in e-commerce start-ups than those without mentorship support (AOR = 2.58, $p = 0.008$). This implies that the odds of participation were 158% higher among students who received mentorship. Mentors can provide guidance, business advice, networking opportunities, and practical support that help

students overcome challenges and increase their confidence in establishing and managing e-commerce ventures.

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a discussion of the study findings in relation to the study objectives and existing literature. It also provides a summary of the key findings, draws conclusions based on the study results, and presents recommendations aimed at enhancing students' participation in e-commerce startups at Makerere University.

5.1 Discussion

5.1.1 Socio-Demographic Factors Associated with Students' Participation in E-Commerce Start-ups

The study found that gender was significantly associated with students' participation in e-commerce start-ups, with male students being more likely to participate than female students. Similarly, the multivariate analysis showed that male students had higher odds of participating in e-commerce start-ups compared to female students. This finding is consistent with Ismail, Bvuma, and Chimucheka (2024), who reported that male students often exhibit higher levels of entrepreneurial participation than their female counterparts. The observed difference may be explained by variations in access to entrepreneurial opportunities, business networks, and resources that support venture creation. Although digital platforms have reduced some traditional barriers to business entry, gender disparities in entrepreneurial participation continue to exist among university students.

Age was also found to be a significant predictor of participation in e-commerce start-ups. Students aged 24–26 years and those aged 27 years and above were more likely to participate in e-commerce start-ups than students aged 18–20 years. This finding supports the argument by Cacija, Lovrinčević, and Bilić (2023) that age influences entrepreneurial engagement

through differences in experience, maturity, and exposure to business opportunities. Older students are likely to have accumulated more knowledge, developed broader social networks, and gained greater confidence in managing business activities. They may also face increasing financial responsibilities, which motivate them to explore entrepreneurial ventures as additional sources of income.

The findings further revealed that year of study was significantly associated with participation in e-commerce start-ups. Students in Year 4 and above were more likely to participate in e-commerce start-ups than those in lower years of study, while Year 3 students were less likely to participate compared to Year 1 students. The higher participation among final-year students supports the findings of Chen (2023), who observed that academic progression enhances students' entrepreneurial capacity through increased exposure to entrepreneurship education, project-based learning, and professional networking opportunities. As students approach graduation, they may become more interested in self-employment and business creation as alternatives to formal employment. The lower participation observed among some Year 3 students may be attributed to increased academic workload and competing academic commitments that limit engagement in entrepreneurial activities.

5.1.2 Influence of Socioeconomic and Entrepreneurial Factors on Students' Participation in E-Commerce Start-ups

The study found that digital skills significantly influenced students' participation in e-commerce start-ups. Students with high digital skills were more likely to participate in e-commerce ventures than those with moderate or low digital skills. This finding is consistent with Liang, Wang, and Li (2025), who reported that individuals with stronger digital competencies are more likely to engage in digital entrepreneurship because they can effectively utilize online platforms, manage digital transactions, and interact with customers. Since e-

commerce businesses operate primarily through digital technologies, students with higher digital skills are better positioned to identify opportunities and successfully manage online business activities.

Entrepreneurship exposure was also found to be a significant predictor of participation in e-commerce start-ups. Students who had been exposed to entrepreneurship were more likely to participate in e-commerce ventures than those without such exposure. This finding supports the work of Chen (2023), who found that exposure to entrepreneurial environments, role models, and practical business experiences increases students' entrepreneurial engagement. Entrepreneurship exposure enhances students' awareness of business opportunities, strengthens entrepreneurial confidence, and equips them with the knowledge required to establish and manage business ventures. Within the university environment, exposure gained through entrepreneurship education, innovation programs, and business-related activities may encourage students to explore e-commerce opportunities.

Access to finance was another significant factor associated with participation in e-commerce start-ups. Students who had access to financial resources were more likely to participate in e-commerce ventures than those without access to finance. This finding is in agreement with Ismail, Bvuma, and Chimucheka (2024), who observed that access to financial resources is essential for entrepreneurial participation, particularly among young entrepreneurs. Although e-commerce businesses generally require lower start-up capital than traditional businesses, financial resources remain necessary for purchasing products, digital marketing, internet services, and other operational requirements. Consequently, students with access to financial support are more likely to initiate and sustain e-commerce business activities than those facing financial constraints.

5.1.3 Influence of Technological and Institutional Factors on Students' Participation in E-Commerce Start-ups

The study found that technological and institutional factors significantly influenced students' participation in e-commerce start-ups. Internet access emerged as the strongest predictor of participation, with students who had access to the internet being more likely to engage in e-commerce start-ups than those without internet access. This finding is consistent with the Technology Acceptance Model (Davis, 1989), which suggests that individuals are more likely to adopt technologies when they perceive them as useful and accessible. It also supports the findings of the UNDP (2023), which highlighted the importance of digital infrastructure in facilitating participation in the digital economy. Since e-commerce activities are conducted through online platforms, access to reliable internet connectivity provides students with opportunities to market products, communicate with customers, and conduct digital transactions.

The findings further revealed that mentorship was significantly associated with participation in e-commerce start-ups. Students who had access to mentorship were more likely to participate in e-commerce ventures than those without mentorship support. This finding agrees with Ismail, Bvuma, and Chimucheka (2024), who reported that mentorship plays a critical role in enhancing entrepreneurial confidence, business knowledge, and access to professional networks. Through mentorship, students can obtain practical guidance on business development, problem-solving, and decision-making, which increases their ability to initiate and sustain e-commerce ventures.

Training was also found to be a significant predictor of participation in e-commerce start-ups. Students who had received training were more likely to engage in e-commerce ventures than

those who had not received training. This finding supports Chen (2023), who found that entrepreneurship and skills-development training positively influence entrepreneurial participation among university students. Training equips students with the practical knowledge and competencies required to identify business opportunities, develop business models, utilize digital platforms, and manage entrepreneurial ventures effectively. As a result, students who receive relevant training are more likely to possess the confidence and skills necessary to participate in e-commerce start-ups.

5.2 Conclusion

The study examined the factors influencing students' participation in e-commerce startups at Makerere University and found that participation is significantly influenced by a combination of socio-demographic, socioeconomic, entrepreneurial, technological, and institutional factors. The findings revealed that gender, age, year of study, digital skills, entrepreneurship exposure, access to finance, training, internet access, and mentorship significantly influenced students' participation in e-commerce startups. Students who possessed stronger digital skills, had exposure to entrepreneurship, access to financial resources, internet connectivity, training opportunities, and mentorship support were more likely to engage in e-commerce ventures. The study therefore concludes that enhancing students' access to entrepreneurial resources, technological infrastructure, financial support, and capacity-building opportunities can promote greater participation in e-commerce startups and contribute to the growth of digital entrepreneurship among university students.

5.3 Recommendations

Strengthening Digital Skills Development: Makerere University should strengthen digital skills development programs through workshops, short courses, and practical training sessions aimed at enhancing students' ability to effectively use digital technologies and online platforms

for business purposes. This will improve students' readiness to participate in e-commerce start-ups and the broader digital economy.

Enhancing Entrepreneurship Exposure: The university should increase students' exposure to entrepreneurship through entrepreneurship clubs, innovation hubs, start-up competitions, business exhibitions, and interactions with successful entrepreneurs. Such initiatives can help cultivate entrepreneurial mindsets and encourage students to explore e-commerce business opportunities.

Improving Access to Financial Support: Makerere University, in collaboration with government agencies, financial institutions, and development partners, should establish mechanisms that improve students' access to start-up capital. These may include entrepreneurship grants, innovation funds, start-up competitions, and affordable financing schemes to support student-led e-commerce ventures.

Expanding Entrepreneurship and Business Training: The university should provide more entrepreneurship and e-commerce-related training programs focusing on business planning, digital marketing, financial management, innovation, and online business operations. These programs will equip students with the practical skills required to establish and manage successful e-commerce start-ups.

Improving Internet Accessibility and Digital Infrastructure: The university should continue investing in reliable internet infrastructure and digital resources to ensure that students have adequate access to the technological tools necessary for participation in e-commerce activities. Improved connectivity will facilitate access to online markets, customers, and digital business platforms.

Strengthening Mentorship Programs: Structured mentorship programs should be strengthened by linking students with experienced entrepreneurs, industry professionals, and

business leaders who can provide guidance, practical advice, and networking opportunities. Effective mentorship can enhance students' confidence and ability to navigate challenges associated with establishing and growing e-commerce start-ups.

Promoting Inclusive Participation in E-Commerce start-ups: The university should implement targeted initiatives aimed at increasing participation among groups with lower involvement in e-commerce start-ups, particularly female students and younger students. These initiatives may include mentorship schemes, entrepreneurship awareness campaigns, role-model programs, and tailored capacity-building interventions designed to encourage broader participation in digital entrepreneurship.

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APPENDIX

Appendix 1: Questionnaire for the Study

Dear Respondent, my name is Atukwatse Edith, a student at Makerere University pursuing a Bachelor of Science in Quantitative Economics. I am conducting a study to examine the factors influencing student participation in e-commerce activities. You are kindly invited to take part in this study by providing your responses to the questions in this questionnaire. The information you provide will be treated with strict confidentiality and will be used strictly for academic purposes only. Your participation is entirely voluntary, and you are free to decline to participate or withdraw from the study at any time without any penalty or consequence.

Do you agree to participate in this study?

☐ Yes

☐ No (*If no, terminate survey*)

Section A: Socio-Demographic Characteristics

1. Age (in years):

☐ 18–20

☐ 21–23

☐ 24–26

☐ 27 and above

2. Gender:

☐ Male

☐ Female

3. Year of Study:

☐ Year 1

☐ Year 2

☐ Year 3

☐ Year 4 or above

4. Do your friends influence your decision to engage in business activities?

☐ Yes

☐ No

Section B: Socioeconomic Factors

5. How would you rate your ability to use digital tools (e.g., social media, online platforms, mobile apps)?

☐ Low

☐ Moderate

☐ High

6. Do you have access to financial resources to start a business?

☐ Yes

☐ No

7. Have you ever been exposed to entrepreneurship (e.g., training, family business, business clubs)?

☐ Yes

☐ No

Section C: Institutional Factors

8. Do you have reliable access to internet and digital devices (smartphone/laptop)?

☐ Yes

☐ No

9. Do you have access to mentorship or guidance in business or entrepreneurship?

☐ Yes

☐ No

10. Have you received any training in entrepreneurship or digital business skills?

☐ Yes

☐ No

Section E: Participation in E-commerce Startups

11. Are you currently involved in any e-commerce business (e.g., selling products/services online via WhatsApp, Instagram, Jumia, etc.)?

☐ Yes

☐ No

12. If yes, what type of e-commerce activity are you involved in?

☐ Selling products

☐ Offering services

☐ Both

13. What platform do you mainly use?

☐ WhatsApp

☐ Instagram

☐ Facebook

☐ Jumia/Jiji

☐ Others (specify): _____

Thank you for taking the time to complete this questionnaire.