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**A FRAMEWORK FOR ONLINE SHOPPING AMONG
POSTGRADUATE STUDENTS DURING COVID-19**

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**A project report submitted in partial fulfilment of the requirements for the award of the
Master of Science in Information Technology Management of the University of Nairobi**

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DECLARATION

I declare that this research project is my original work and has not been presented to any other University for the award of a degree.



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This research project report has been submitted for examination in partial fulfilment for the award of Master of Science Degree in Information Technology Management of the University of Nairobi with my approval as the university supervisor.

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ABSTRACT

More than 7.2 Billion people globally have done shopping online in recent years because of internet development and its ease of access. Consumers are adopting new online shopping behavior, and many organizations, enterprises, and governments are moving to online platforms to offer products and services and maintain operations. The pandemic prompted a major decrease in economic activity for which economies were completely unprepared; nonetheless, the requirement for much activities to go online resulted in an increase in e-commerce. According to a MasterCard study on consumer expenditure, approximately four out of five (79 percent) surveyed Kenyans have increased their internet buying since the COVID 19 outbreak began. The aim of this study was to find out the online shopping opportunities and challenges among postgraduate students during COVID 19.

The study applied the Technology Acceptance Model (TAM), a descriptive survey research design, and purposive and stratified random sampling methods for the qualitative and quantitative sampling respectively. The responses from of the online structured questionnaires were analyzed using by use of the Python Pandas tool.

The results showed that the opportunities and challenges of online shopping in Kenya are access to Internet, alternative online payments solutions, logistical solutions, regulations and governance, lack of trust among consumers, lack of trust among consumers, literacy levels and e-commerce infrastructure. Perceived usefulness, perceived ease of use, attitude and behavioral intention are confirmed to be reliable.

The research was restricted to postgraduate students and did not cover undergraduates who are the majority and therefore giving a skewed picture of the entire consumer population. The findings will provide online platform users, marketers, and policymakers with a framework and a basis to identify opportunities and challenges that affect online shopping among postgraduate students.

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ABBREVIATIONS

AfCFTA	African Continental Free Trade Area
AI	Artificial Intelligence
ATT	Attitude
BI	Behavioral Intension
CA	Communication Authority of Kenya
CSFs	Critical Success Factors
Covid-19	Corona virus Disease 2019
FMCG	Fast Moving Consumer Goods
ICT	Information Communication and Technology
KICA	Kenya Information and Communications Act
KRA	Kenya Revenue Authority
NAS	National Addressing System
PEoU	Perceived Ease of Use
PU	Perceived Usefulness
SMEs	Small and Medium Enterprises
TAM	Technology Acceptance Model
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UoN	University of Nairobi
UTAUT	Unified Theory of Acceptance and Use of Technology
VSAT	Very Small Aperture Terminal

DEFINITION OF TERMS

Consumer Behavior:	It is the belief, feeling and behavioral intents of a customer towards some objects in complicated marketing which most of the time is brand or retail store.
Consumer:	It is an individual who buys a certain good or service for their use
Convenience:	Fitness or suitability for performing an action or fulfilling a requirement.
Customers' choice:	Refers to the decisions that consumers make concerning products and services.
In-store:	It is something that takes place or exists in a large shop, or is present for clients to use or purchase inside a large shop.
Kadogo economy:	The Kenyan informal markets of fast-moving consumer goods serving low-income populations typically involve kiosks/stands that sell commodities at their lowest divisible level and at affordable prices.
Merchant:	It is a company or an individual who sells services or goods exclusively over the internet.
M-Pesa:	M-Pesa was introduced in 2007 by Vodafone Group plc and Safaricom, Kenya's leading mobile network operator, as a mobile phone-based money transfer, payments, and micro-financing service.
Online platforms:	Commercial digital environments that enable different parties to interact online
TukTuk:	Three wheeled popular mode of transport in Kenya

CHAPTER ONE

INTRODUCTION

1.1 Background

More than 7.2 Billion people globally have done shopping online in recent years because of internet development and its ease of access. Books, airline reservations, clothing, videogames and other electronic products are the most popular items purchased on the internet. Business firms coordinate various marketing related activities like market research, product development, making customers aware about features of products, promotion, customer services, and customer feedback through electronic marketing and internet communication (Dani, 2017).

The process of online shopping usually enables buyers to use “search” features to spot certain models, brands, or items. Customers who want to shop online should have internet access and a valid mode of payment, like a credit card, an interact-enabled debit card, or a service like PayPal. Convenience, variety, low prices, original services, personal attention, and simple access to information are some of the possible gains of shopping online for consumers (Duarte et al., 2018).

Furthermore, other recent research shows that purchasing online can assist to achieve a sustainable competitive advantage that can provide ecological long-term stability in line with the Sustainable Development Goals of the 2030 Agenda (SDGs): It demonstrates that customer engagement and perceived sustainability in online purchases are linked. By reducing the number of shopping trips, online purchasing can help to encourage sustainable practices (Sreeram et al., 2017).

This trend in buyer behavior has accelerated rapidly with the advent of COVID-19, prompting firms to reach out to even their most loyal brick-and-mortar customers online. Organizations have come up with solutions to adapt to this new normal. Various types of businesses sell their goods and services online by use of online platforms (Ali, 2020).

Due to decreased foot traffic in supermarkets and open-air markets, businesses have shifted to e-commerce, either by creating new online shopping platforms or working with existing ones. Small business owners who formerly relied on physical shopping have also migrated to online platforms, relying on social media and e-commerce to contact their customers. During this

crisis, consumer demand has also changed. Following the closing of workplaces and gyms, e-commerce platforms reported an upsurge in demand for computers, digital peripherals, and home fitness equipment. Customers are also purchasing smaller, boutique items like organic cosmetic products online, leading to increased sales and income for platforms. *(6 Ways Digital Platforms Can Accelerate Growth during COVID-19)*

The rise in online usage and buying has produced related businesses such as those that track visits to a company's website in order to boost online sales. The increase in online advertisement has led to increased use of online shopping platforms. The keyword search feature is built into the online marketing platforms, giving online clients multiple features *(COVID-19 Has Changed Online Shopping Forever, Survey Shows | UNCTAD)*.

Kenya has a population of 54.38 million people, with 21.75 million people using the internet as of January 2021. The country's internet penetration stands at 40.0% (DATAREPORTAL). The rate of internet users has been increasing yearly, and it truly shows the increase in online shopping. Global gross domestic product (GDP) fell 4.3 percent in 2020, according to a UNCTAD report (UNCTAD, 2020). Global goods trade fell by 9%, while global services trade fell by 15%. At the same time, from 2019 to 2020, e-commerce's share of global retail rose from 14% to 17%. For example, between August 2019 and August 2020, China's online retail market share grew from 19.4 percent to 24.6 percent. During the same time period, Kazakhstan's internet retail market share rose from 5% to 9.4%. Between February 2020 and March 2020, the number of shopping applications downloaded in Thailand grew by 60%. In 2020, digital change accelerated in the teleworking, remote learning, online conferencing, gaming, and digital entertainment sectors.

1.2 Problem Statement

UNCTAD reported that the Covid-19 pandemic has dominated worldwide economic development in 2020. The pandemic led to a major decrease in economic activity, for which most economies were not prepared. However, as a result of the necessity for much activity to move online, there has been an increase in e-commerce. Consumers are adopting new online shopping behavior, and many organizations, enterprises, and governments are switching to online platforms to offer products and services and maintain operations. Though the increase in online demand and activity gives a potential for digital platforms to venture into new markets, platforms must pivot strategically to take advantage of this opportunity and maintain

company operations. Therefore, this study intended to identify the opportunities and challenges in online shopping and identify a suitable framework for online shopping.

1.3 Objectives

1. To identify the opportunities and challenges in online shopping among postgraduate students.
2. To identify a suitable framework for online shopping.
3. To evaluate the identified framework among the study population.

1.4 Research Questions

1. What are the opportunities and challenges related to online shopping among postgraduate students?
2. What framework is suitable for online shopping?
3. How suitable is the identified framework among the study population?

1.5 Significance

The study provides an understanding of the determinants of the consumer's choice of e-commerce and social media platforms. It will assist entrepreneurs, investors, the Kenyan government, consumer protection bodies, marketers and retailers to formulate policies, frameworks and marketing strategies, therefore, enhancing the penetration of online shopping and its effectiveness. As a result, it aids businesses in increasing the quality of their consumer services and contributes to the country's online shopping research.

1.6 Scope

The study targeted postgraduate students at the University of Nairobi because the institution is in the best position to represent the post-graduate students in Kenya who shop using online platforms. Endowed with sufficient resources both human and infrastructure and thus the availability of data in addition to it following the trend of the digital information age hence better equipped than the private universities.

CHAPTER TWO

LITERATURE REVIEW

2.1 Online Shopping Platforms

Online platforms are commercial digital environments that enable different parties to interact online. They are becoming more significant in the global economy, with data-driven business models complementing, disrupting, and even displacing traditional company models (Cascio & Montealegre, 2016).

Many businesses have decided to set up online stores as a result of the Covid-19 lockdown, and it is expected that e-commerce in Kenya would advance and grow to satisfy the increased demand. Online shopping has therefore become a trend in Kenya with some of the leading online shopping platforms during Covid-19 as determined by the volume and value market share include Jumia, Kilimall, Masoko, Jiji, Cheki and Gadzone among others (*Top Shopping Apps Ranking in KE*).

Other categories are General Online Shopping platforms, for example, Copia, Aliexpress etc. The Electronic shop category include Gadget World, Phone Place Kenya etc. The online fashion platforms dealing mostly if not exclusively in fashion include Sarai Afrique, Fashion 254, etc. In the pharmaceutical category, we find MyDawa, e-pharmacy etc. and the Online Grocery platforms include Food-Plus, Think Organic Kenya, etc.

Because of the convenience, reach, and ease of use that social media provides, some SMEs may choose to use it instead of constructing a website to sell their products and services. They give advertising services directly or through 'word of mouth' among the social networking community, although not usually providing direct transaction services. Kenyan businesses primarily use Facebook, Instagram, and Twitter as social media platforms. By a wide margin, Facebook is the most popular social networking platform in Kenya. It had approximately 10 million active users as of December 2020, and this number is rising. Because of its popularity and reach, it is vital critical for firms to develop their communities and undertake digital advertising efforts (*Kenya Facebook Users by Age 2021*). (Nguyen, 2018).

2.2 Opportunities and Challenges of Online shopping in Kenya

Kenya's e-commerce industry has constantly grown as one of Africa's most vibrant. Although precise data and figures are missing, the Kenyan e-commerce business is predicted to generate revenues of USD 2 billion by 2024 (Statista).

The local e-commerce sector has been gradually growing in recent years, bringing more local participants, such as marketplaces that have adapted to the local context, but also traditional brick-and-mortar firms that are embracing e-commerce (“State of E-Commerce in Kenya,” 2020).

a) Access to internet

Between 2014 and 2017, over 4 million Kenyans accessed the internet using mobile phones, increasing adoption from 16 percent to 24 percent. This rise was attributed to two enablers: infrastructure and affordability, according to the GSMA's The Mobile Economy 2019 study. Improved network coverage drove the former, with 3G coverage expanding from 67 percent in 2014 to 85 percent in 2017, and 4G reaching more than a third of the population (“State of E-Commerce in Kenya,” 2020).

Kenyans use mobile phones and cybercafés to access the Internet. Cybercafés provide Internet access to people of all socioeconomic levels. They provide clients with various Internet usage models than those available on mobile phones, for instance, they are better suited to video viewing and huge downloads, and hence remain important ways of access for both mobile Internet users and those who do not use mobile Internet. However, thanks to lowering rates, more individuals can now access internet at home or on their phones, putting their business model in jeopardy (*2016 E-Commerce Sub-Sector Assessment Report for Kenya*).

b) Alternative Online payments solutions

Payment systems are rapidly developing, giving consumers and business customers more options for paying for items and services purchased online. In Kenya, debit and credit cards like MasterCard and Visa are not widely used. The most popular local methods of e-commerce payments are M-Pesa, Airtel Money, T-Kash and Equitel. For example M-PESA, Safaricom's mobile payment system, makes domestic payments simple by allowing for easy fund transfers between people. M-Pesa was upgraded by Safaricom in 2013 to allow for simpler internet

integration and transactions via 'Lipa Na M-PESA online,' a payment service that allows clients to make online payment for goods and services (Akram, 2018).

Interestingly, despite the availability of mobile money and credit cards, the majority of Kenyans who shop online prefer to pay for their purchases when they receive them. Data from the CA shows that Kenyans conducted 425.3 million mobile commerce transactions between July and September 2019. According to the operations, KES 1.6 trillion was spent in the quarter on online purchases of products and services. ("E-Commerce Development,")

c) Logistical Solutions

Kenya's postal system is ineffective and cannot be compared to those in more developed markets. The lack of this critical component of a flawless e-commerce experience puts a strain on Kenya's e-commerce growth. However, in recent years, a number of commercial logistics providers have stepped in to provide the critical last-mile delivery logistic component. With quick advancements, this area has become a favorite spot for investors. Lori Systems, Kobo360, Sendy, and Amit Truck, have raised millions of dollars in the last several years. DHL also just launched DHL Express, a platform that establishes a standard for arranging e-commerce shipping and logistics in the East African region ("State of E-Commerce in Kenya," 2020).

E-commerce enterprises such as Bid or Buy often use motorbike delivery services in Nairobi and use the country's major national courier companies to deliver to other regions of the country. However, because in-house delivery fleets are not a realistic choice for many businesses due to the high investment levels needed, courier and postal services that provide an efficient, integrated, and dependable outsourcing option present an opportunity ("E-Commerce Development,").

d) Regulations and Governance

Kenya is yet to enact legislation to protect consumers' online purchasing and selling rights. Because online trade platforms do not comprise electronic services as defined by the KICA, they are not regulated and thus not licensable. As a result, consumers are not covered by the Consumer Protection Regulations, 2010, which apply when the Authority's licenses provide services. The protection afforded to consumers in Part VI (A) of the Act, which deals with electronic transactions and cybersecurity, has been elaborately provided for the growth of online payment systems. One example is the ability to pay taxes online, which has

considerably facilitated cross-border trade. The KRA, which keeps track of tax payments as well as the entrance and movement of transit products, has installed computer systems across the country, ensuring revenue and making doing business with neighboring countries easier. It has also established E-commerce criteria for couriers, with the goal of ensuring high levels of professionalism when transporting customer goods. According to the standards, couriers must develop methods and procedures to ensure proper security of consumer goods, as well as track and trace services for couriered commodities.

The Authority has taken the lead in spearheading the formation of NAS, resulting in increased growth and adoption of e-commerce by making direct-to-consumer deliveries more convenient. In terms of capacity building, the Authority's efforts to subsidize broadband connectivity in public secondary schools will improve literacy levels and expose a larger proportion of the population to the concept of online trading.

e) Lack of trust among consumers

Online shopping is hampered by lack of trust in business transactions conducted over the internet. There have been cases of online fraud from many online shops hence instilling fear into the hearts of buyers. People try to avoid online shopping as much as they can so as not to be cheated out of their money. Information such as credit card details is one of the requirements for e-commerce websites. If the customers do not trust the vendors, then they will be hesitant to give out this information. This leads the younger generation to interact more with these online businesses since most of them do not have the monetary power to own a credit card, conning will be difficult. Online shops are to work on their trust with the customers. They may also adopt friendlier methods of payment such as cash-on-delivery (“State of E-Commerce in Kenya,” 2020).

It's also good noting that the success of making payments using mobile phones has been aided by consumers' faith in Safaricom, Kenya's mobile payments market leader.

Literacy Levels

Conducting e-commerce activities may necessitate the acquisition of new skills and competencies that are lacking in smaller enterprises. Many SMEs that are looking to expand or branch out into e-commerce are severely disadvantaged as a result of this. According to UNESCO, Kenya has a literacy level of 78.73%, which leaves 21.27% illiterate. Illiterate people cannot be in contact with e-commerce sites. This may hit hard in countries with lower levels. Along with those who cannot access the internet and all the other factors. This leads to

reduced potential consumers for companies. The government is putting efforts to ensure every citizen gets an education.

The new Kenyan ICT Master Plan lays out a detailed strategy for enhancing high-end/professional ICT skills that are in great demand in the business. Programs to overcome the ICT skills gap have also been launched by the corporate sector (Misiani, 2018).

f) E-Commerce Infrastructure

E-commerce needs a quick, dependable, and cost-effective internet infrastructure comprised of intermediaries that allow sellers to conduct business with buyers. The main issue is the lack of national fiber infrastructure coverage and internet penetration, particularly in remote areas. The provision of last-mile infrastructure connectivity to homes, schools, and commercial sectors is a second challenge that, if properly addressed, can catapult the country into a knowledge economy. Due to infrastructure limitations in some locations, the government has deployed VSAT to improve internet connectivity to remote outpost schools and government centers that do not have fixed-line access (Misiani, 2018).

Road infrastructure is another significant e-commerce challenge to growth in Kenya. In other parts of the country, the roads when hit with rainfall become difficult to navigate, hence, a huge blow to the companies that do doorstep deliveries. This lowers the reputation of the store, leading to a loss of revenue. Poor roads also cause traffic jams in most urban centers leading to the delay of deliveries that may be urgent to the client. Some orders may get canceled as well due to the delay, thus the company experiences a loss of revenue. Domestic firms such as Copia, which raised 26 million in series B funding last year, Sky Garden, Kilimall, and Africa Sokoni, as well as Jumia, are redefining the space. Most online shops have then resorted to the use of other forms of transport such as motorbikes. Drones are also in use as seen with Astral Aerial Solutions for deliveries (*Ecommerce in 2021*).

2.3 E-Commerce Trends during Covid-19

In this digitalizing economy, countries that grasp the potential of e-commerce will be better positioned to gain from global marketplaces for their goods and services, while those that do not risk lagging so far behind. (*How COVID-19 Triggered the Digital and e-Commerce Turning Point | UNCTAD*).

a) Supply chain visibility

The year 2020 was full of uncertainty and nowhere was it more apparent than in the supply chain industry. A shift towards newer technologies such as predictive analysis and big data analytics is expected to improve visibility. Hence, e-commerce businesses will have to start working towards modernizing inventory and order management systems to improve integration with supply chain partners and to cope with market shocks and uncertainty. Additionally, e-commerce businesses are also highly likely to begin diversifying their supply chain options to avoid supply chain bottlenecks and mitigate overall volatility in the industry (Yuan et al., 2021).

b) Mobile shopping

The mobile platform has been responsible for the majority of online shopping since 2017 and its market share expected to expand to an even higher 79%. More than 8 in 10 shoppers prefer using a mobile app to a mobile website. However, mobile web is still used by 25% of consumers for online shopping, so it needs attention as well. Smartphone apps are an excellent way to keep in touch with your customers on a regular basis and in a direct manner. Hence, messaging platforms including Facebook Messenger and even SMS are now viable sales platforms as both support business messaging and sales features that allow clients to explore products and services and even place orders directly from their messaging app of choice. On the mobile platform, there are also other online trends, they include advertisement, loyalty programs, and even customer service using tools such as AI chatbots (cycles & Text).

c) Personalization

New technologies personalization at a scale is not only possible but also financially feasible. (Nguyen, 2018). One of the most popular technology is conversational AI, which brings cutting-edge AI and big data analytics to traditional customer service. The premise is simple: almost every business today is collecting terabytes on terabytes of data on their customers but only some businesses are leveraging that information for loyalty programs and business messaging. The majority of the businesses are unable to utilize their data. This is where AI comes in i.e. by sending personalized reminders and recommendations based on their previous shopping habits. The capabilities of this technology allow companies to innovate and find new ways to engage with millions of customers on a one-to-one basis autonomously (Ar & Mouseli, 2020).

d) Remote working

The global health crisis forced businesses to adopt new practices and evolve their business models in many ways, including shifting from office work to remote work. However, there are numerous benefits of remote working ranging from cost savings to increased morale. Hence, this practice is one of the few that almost certainly outlive the pandemic. This resulted in a new type of demand from consumers who are now working from home, as well as a new business potential for e-commerce companies. This changes the timings during which consumers are most active on social media, which is important for your social media campaigns. Hence, an increase in demand for home delivery and even pick-up services, depending on your industry (Asante Antwi et al., 2021).

2.4 Impact of Covid-19 Online Shopping

The pandemic has hastened the growth of e-commerce, which is unlikely to slow down once normalcy returns. However, the impact is not uniform across the board. Digitalization has boosted efficiency and empowered people with the necessary resources to create enterprises or maintain their quality of life, but it has also concentrated the power of several huge corporations (*Inside the Digital Society*).

Manufacturing activity and service availability are both factors that influence the relative shift to online B2B and B2C sales through retail and wholesale distribution services. These were, however, disrupted by government-implemented measures to stop the virus from spreading. Many countries across the globe have pushed internet shopping as an alternative to physical shopping, and consumers have changed their buying habits to reduce the risk of infection. Consumers in several African countries, for example, pay with mobile money and have their products delivered by tuk-tuks, which are bicycle and motorbike taxis provided by Uber, SafeBoda, or other similar services. This growth of delivery services has resulted in more jobs being created, even if they are only temporary. (*E-COMMERCE, TRADE AND THE COVID-19 PANDEMIC*).

In finance sector, certain mobile phone firms have taken unilateral actions to lower their costs on mobile payments, and governments have complimented these steps by attempting to avoid the usage of cash. Many central banks have relaxed some of the limits and regulations imposed on electronic payment systems, particularly in Africa, where mobile payments are widely used. Kenya, for example, took temporary measures such as raising daily transaction limits and

suspending fees for money transfers between mobile providers and banks (*Coronavirus (COVID-19): SME Policy Responses*).

The COVID-19 outbreak has sparked a boom in the usage of telemedicine services, as the virus's spread has prompted requests for more widespread use of the technology. Some platforms saw three-digit growth between December 2019 and January 2020, with one seeing a 900 percent increase. Certain providers are expanding their services to allow patients to access services from other countries, and some jurisdictions are reviewing laws and regulations to make telemedicine services more accessible, albeit on a trial basis (Ar & Mouseli, 2020).

As a result of the COVID-19 pandemic, electronic products constitute the most afflicted industry. Electronic components that are built into finished products such as consumer electronics and computers and then exported account for a significant portion of China's imports. The supply chain for electronic items has become increasingly packed as a result of the plant shutdown, which has a detrimental impact on the electronics e-commerce sector (Ltd).

New health restrictions that have disrupted land, sea, and air freight transit have had an impact on international transportation and logistics services, which are essential for all e-commerce and traditional trade activities. More than a million passenger flights that used to deliver postal mailings and other small consignments have been canceled, resulting in a considerable increase in customers (*E-COMMERCE, TRADE AND THE COVID-19 PANDEMIC*).

2.5 Developments of Online Shopping

The e-commerce world is becoming increasingly competitive. E-commerce companies are putting considerable effort into improving their digital infrastructure to meet increasing demands. Transaction-management capabilities remain a priority, as more customers are purchasing on mobile devices and looking for credit options. Giving customers personalized, Omni channel experiences that also enable them to use their preferred payment platforms is no longer simply advantageous but expected. With the constraints of supply chains due to the pandemic, order-fulfillment quickly became a challenge for online platforms. Delivery and transport costs not only make up a sizeable portion of e-commerce expenses, but many platforms have difficulties meeting customer-shipping requirements. For this reason, more customers are opting to shop on marketplaces rather than individual e-commerce stores. Shoppable video ads on platforms such as TikTok and Instagram are also creating a shift in the industry. They indicate a promising future for e-commerce on social media platforms.

Businesses that target young audiences have much to gain as they can influence buying decisions through direct engagement with a tech-savvy generation. (“State of E-Commerce in Kenya,” 2020).

2.6 The uniqueness of Kenyan Ecommerce

Kenya is well positioned to profit from the AfCFTA, thanks to the launch of the Digital Economy Blueprint in May 2019, which has the potential to create an example for a new digital Africa and stimulate more cooperation among African countries. A digital economy, with its disruptive innovations, could help Kenya's economy grow. M-Pesa, for example, was one of the first banking apps to be integrated into mobile SIM toolkits. Mobile money infrastructure has spawned a new market and upset the financial industry environment, posing a serious threat to traditional banking. Mobile money allows you to send money from one person to another, buy airtime, and pay utility bills, among other things. M-Pesa brought together a previously unbanked population, i.e. people who did not use usual banking systems. Artificial intelligence, robotics, blockchain, drones, the Internet of Things, big data, and software-enabled industrial platforms are among the disruptive technologies with the most potential to effect economic progress. M-Pesa, for example, revolutionized the financial industry by drastically increasing financial inclusion and bringing up new business models and opportunities such as pay-as-you-go, digital credit, and betting (Republic of Kenya, 2019).

More than 70% of fast-moving consumer goods (FMCG) purchases are for products under Sh55, indicating that Kenya's informal economy, dubbed as the 'Kadogo Economy,' is still popular.

Kenyan slang for "small" is "kadogo." Due to financial constraints, satisfying everyday basic necessities for a large number of consumers might be difficult. Consumers are price-conscious and value-oriented, but they are willing to pay more for high-quality products if they believe they are worth it. It's no longer merely a pricing game. Convenience, availability, and shopping ease are just a few of the characteristics that consumers use to make purchasing decisions. Many firms have responded by introducing the 'Kadogo economy,' which involves selling items at their smallest divisible level and allowing consumers to make tiny daily purchases with their limited cash rather than pricing them out of the market. Firms including Proctor & Gamble (P&G) and Bidco have recently launched compact packaging of products like detergent and frying fat, following the trend. This has become incredibly popular in Kenya, and firms who fail to react to this fact will suffer as a result.

2.7 Theoretical Framework

a) Unified Theory of Acceptance and Use of Technology (UTAUT)

According to the UTAUT theory, performance expectancy, effort expectancy, social influence, and facilitating conditions are the four primary elements. The first three constructs have a combined influence on user behavior. The fourth construct has no bearing on user intentions but has a direct impact on user behavior. In addition, four modifiers, namely gender, age, experience, and voluntariness of usage, have an indirect impact on behavioral intention and user behavior. Each moderator has an impact on at least one of the four structures (Venkatesh et al., 2003).

The biggest predictor of user intention is performance expectancy, which is the degree to which an individual believes that adopting a system will assist him or her improve work performance. It is moderated by gender and age. The degree to which an individual believes how important others believe he or she could use the new system is referred to as social influence. Six of the UTAUT's contributing hypotheses represent social influence as a subjective norm. It is affected by gender, age, voluntariness, and experience (Venkatesh et al., 2003)

UTAUT takes into account the user's attributes as well as certain situations at the time of the user's ability to utilize a certain system or service. It also takes into account the user's degree of voluntariness, which is overlooked by some other theories. UTAUT is focused on utilizing a single technology (Venkatesh, et al. 2003).

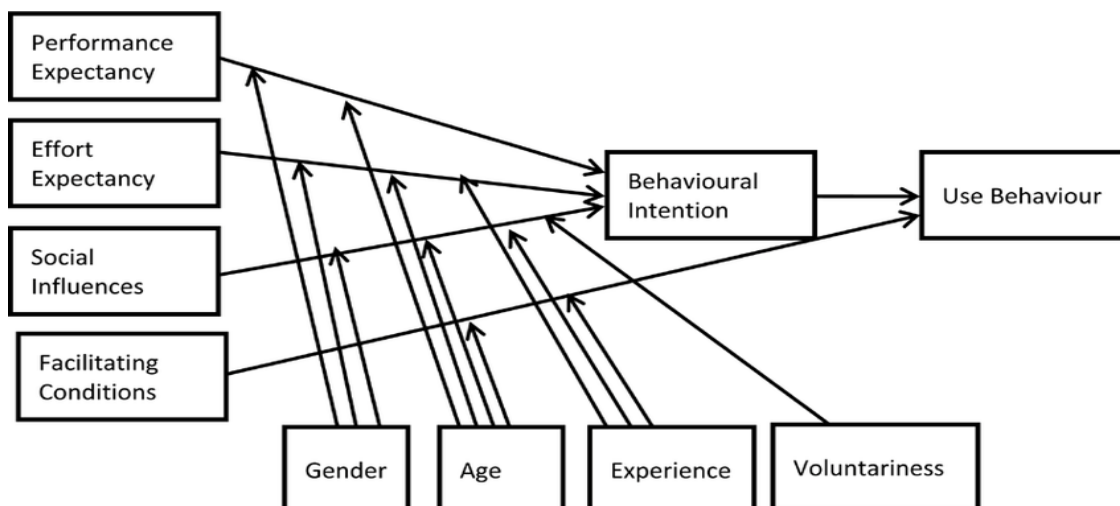


Figure 1: UTAUT Framework

b) Theory of Reasoned Action (TRA)

This theory seeks to predict behavior by taking into account beliefs, attitudes, and intentions in addition to explaining the effect of attitude on behavior context. Attitudes toward behavior are the product of a variety of experiences and beliefs accumulated throughout the course of one's life. The beliefs can be descriptive in nature, resulting from actual experience. They can be inferential, meaning they are not based on direct observations of the person, and they have their roots in descriptive views. Low-income earners in this study will be affected by attitude due to the belief that they cannot purchase goods online.

While TRA is successful in forecasting one's behavior to some level, it does have some limitations, such as the possibility of subjective reporting mistake because observation cannot be applied to the model. It only applies to attitudes and standards, and it assumes that some behaviors are deliberated before they are carried out. Furthermore, it ignores the fact that certain behaviors are unintentional and beyond a person's control (Lorig 2001).

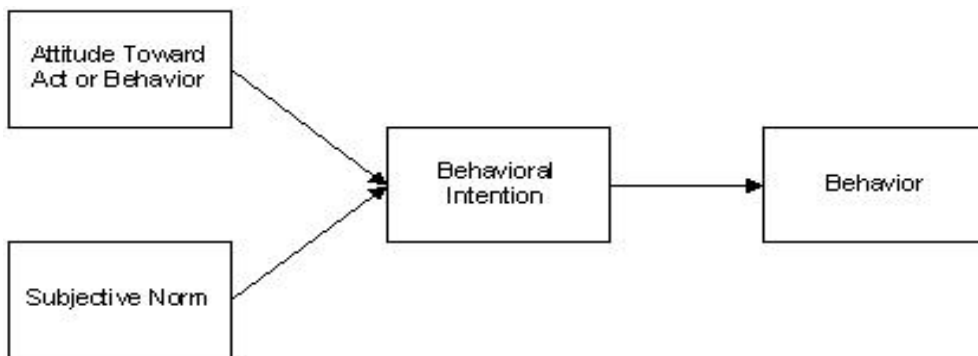


Figure 2: TRA Framework

c) Theory of Planned Behavior (TPB)

TPB is an extension of TRA developed by Ajzen in 1985. It includes an additional construct of perceived behavioral control in addition to the components of attitude and subjective norm. It overcomes TRA's inability to account for situations in which people don't have complete volitional control over their actions (I. Ajzen 1985).

TPB was supplemented by Limayem et al., (2000), who included two new constructs: personal innovativeness and perceived consequences. As a result, his research model contained all of TPB's hypothesized links as well as the novel links discovered in that study. Personal innovativeness, according to Limayem, had both direct and indirect effects on innovation adoption intentions, which were mediated by attitude. The indirect effect implies that inventive

people are more likely to be optimistic about online shopping, which has a beneficial impact on their intentions to purchase online. On the other hand, the direct link between innovativeness and aspirations captures potential impacts that are not entirely mediated by attitude. The other fresh links were added to TPB by Limayem. Representing the "perceived consequences" and their prospective impacts. Triandis' model was used to create this construct (Triandis 1980). He proposed another modification to Ajzen's TPB model, combining all beliefs into a single construct called perceived consequences.

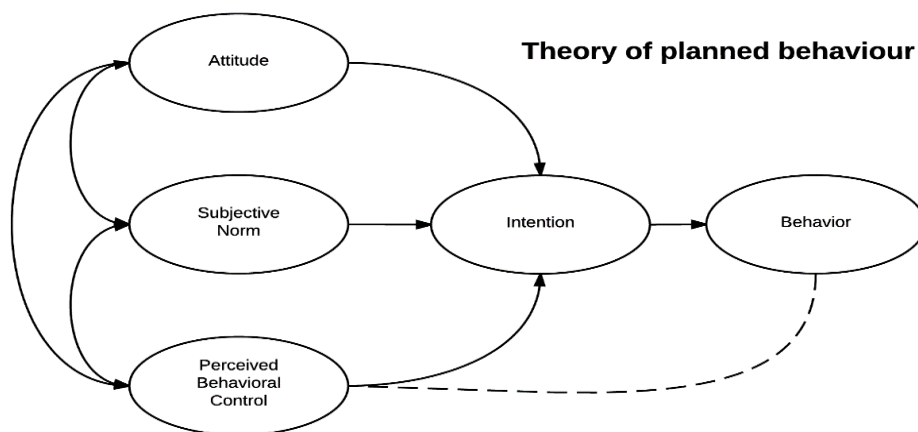


Figure 3: TPB Model

d) Technology Acceptance Model (TAM)

TAM has been clarified as an individual's acceptance of the technology proposed. It studies individual technology acceptance behavior in numerous types of information systems. Moreover, TAM is one of the most widespread models used since 1989 (Alhadi & Al-Shaibany, 2017).

Three dimensions can explain the desire of a user to accept a new innovation: perceived ease of use (PEU), perceived usefulness (PU), and attitude toward using the technology. Both PEU and PU are attitudes that are influenced by beliefs, with PEU having a direct impact on PU (Davis, 1986). The BI to use was added to TAM later as a new variable that is controlled by PU and attitude toward usage (Hansen et al., 2018).

As a result, the two relevant beliefs for defining attitude toward employing computer technology are PU and PEoU. PEoU helps people perform better since the time saved due to simplicity of use allows them to complete more tasks. That is, if a system is seen as difficult to use, it is less likely to be beneficial to a broad audience. As a result, if two systems have the

same features, the average user is more likely to choose the one that is easier to use and, as a result, more useful (Carlos & Soares, 2011).

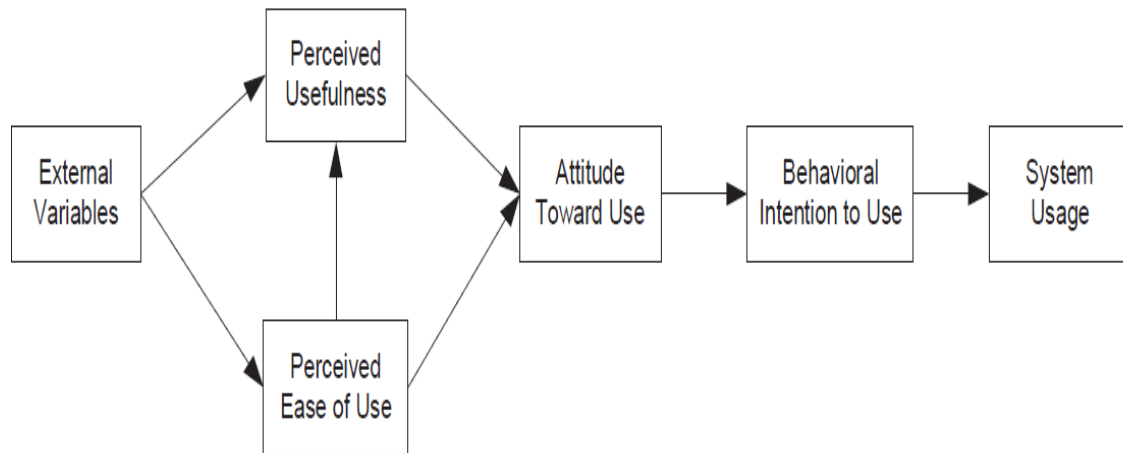


Figure 4: The Original TAM Framework

Determinants of Online Shopping

Because purchasing is a habit, and online shopping is reliant on technology, TAM was employed in this study to examine one's attitude toward intention to use new technologies. Perceived Usefulness, Perceived Ease of Use, Attitude, and Behavioral Intention were the primary constructs in the model.

The degree to which a person believes that applying a certain technology would improve his or her job performance is known as perceived usefulness (PU) (Blagoeva & Mijoska, 2017). It demonstrates how internet purchasing platforms influence customer intent. Therefore, it is considered as the most important determinant of intention towards online shopping use. PU includes benefits such as reasonable prices, availability of information, natural search and comparison (Do et al., 2019). In addition, it helps the platform users have more choices and they can save time as well, as compared to traditional shopping. They save time and provide a foundation for businesses all over the world to grow their distribution networks and reach out to more customers.

The degree to which a person believes that utilizing a certain technology would be easy is known as Perceived Ease of Use (PEoU) (Blagoeva & Mijoska). Therefore, when technology gives consumers a sense of comfort when used, it is likely that consumers will accept the technology (Do et al., 2019). Businesses that provide online purchasing services must constantly improve the client experience. The benefits connected with ease when purchasing

online are the key drivers for consumer intent and shopping behavior, according to Jiang & Yang (2013).

Attitude is a set of ideas that integrates object characteristics with their position in the world, particularly in relation to personal aspirations (Lee et al., 2007). Online shopping is the object in the context of e-commerce, and the qualities are the benefits and hazards associated with online purchasing (Hsu et al., 2006). Kim (2012) used attitude (ATT) in TAM as a mediating factor between perceptions (PEOU and PU) and behavioral intentions (BI), and it had a favorable effect on behavioral intentions (Alyami & Spiteri, 2015)

Behavioral Intention (BI) to online Shopping influenced by Attitude. It assesses the strength of an individual's desire to engage in the behavior, and is used to predict a voluntary conduct (Blagoeva & Mijoska, 2017). It's vital to remember that the behavioral desire to carry out the act is what's being measured, not the actual usage.

TAM has been utilized as a model for studying online shopping in companies through the usage of online platforms by researchers.

Prakosa & Sumantika (2020) recommended the e-marketplace managers pay attention to other variables such as trust and customer service since buyers desire a pleasant buying experience in addition to simplicity of use and benefits.

Blagoeva & Mijoska (2017), recommended E-commerce managers and marketers use; trust, customer service, and website usability to improve the shopping experience and customer service.

Singh et al. (2018) extended TAM by adding two variables: Trust, Perceived enjoyment, and recommends future researches to include other such variables that have an impact on online shopping behavior.

TAM is a key model applied in many online shopping kinds of research for explaining the use, behavior and attitude. Despite the model's influence in information systems research, which includes the usage of online commerce platforms, the model contains flaws. According to Nistor et al. (2014), TAM focuses on perceived utility as the most important acceptance signal, ignoring actual use of the technology. This is troublesome since there was no discernible link between a person's stated goal and their actual use behavior. It's also crucial to look into how people actually utilize technology, rather than just how they think they do, as TAM currently does.

2.8 Conceptual Framework

Figure 2 below presents the proposed Research Model based on the above discussions.

Independent variable

Perceived Usefulness (PU)

Perceived Ease of Use (PEOU)

Attitude (AT)

Behavioral Intention (BI)

Customer Service (CS)

Perceived Security (PS)

=

Dependent variable

Online Shopping

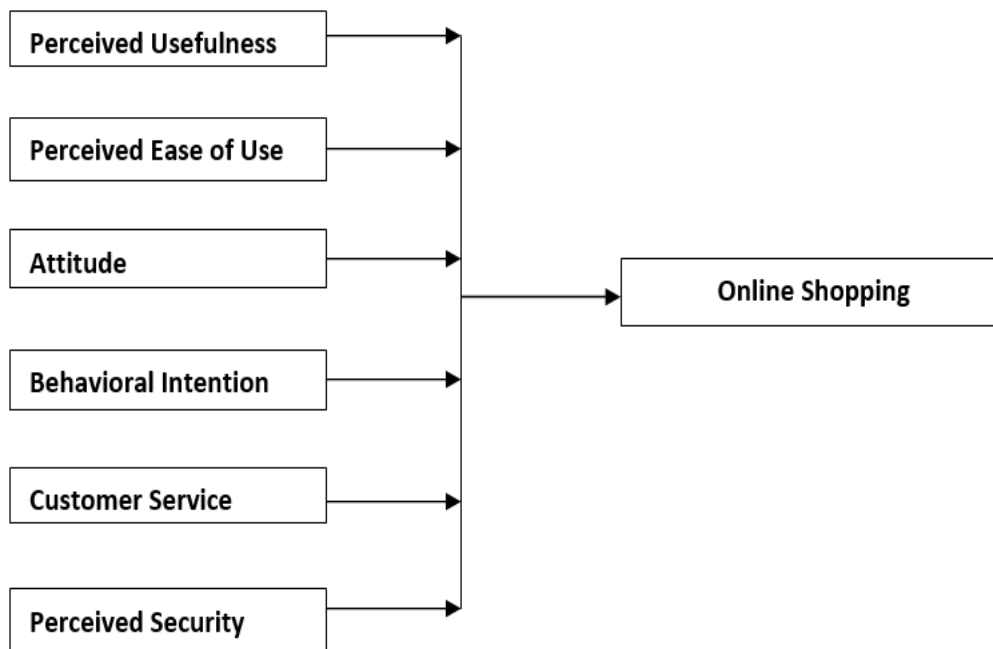


Figure 5: Model-based on the final verified version of the TAM model

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

Because the cause and effect linkages were found and measured, the study used a descriptive survey research methodology. For example, before asking why, a marketer or businessperson considering targeting these specific consumers needs to know what the current status of the market is during COVID-19, how it changes by rising or decreasing, and when it changes.

3.2 Target Population

The targeted population is the particular group of people identified as having common characteristics and can give the required information in a research study (Hancock et al.). The study targeted postgraduate students who shop via the use of online platforms since they best represent those who shop online.

3.3 Sampling Design

The sampling design used was a mixed-method approach. Based on the purpose of the research study, the study used purposive sampling as a method of qualitative sampling to sample the post-graduate students. Random Sampling used as a method for quantitative sampling to come up with a sampling selection of 100 postgraduate students

The selected sample represents the population and the researcher ensured that variability in regards to Age, Gender, Income and Social Status was factored in the selection.

3.4 Data Collection Methods and Instruments

The researcher used the secondary data collection method to refer to essential studies to use them as a building platform for the study of consumer intent when using online shopping platforms among postgraduate students. The resources such as publications, prestigious articles, and academic books helped the researcher expand knowledge and build new ideas.

For purposes of Primary data collection, survey questionnaires were used to collect the needed data from the respondents. The questionnaire were categorized into sections and the respondents were given enough time to answer the questionnaires for purposes of accuracy.

Some of the questions were open-ended whereas the rest used Likert 5 as a scale to assess the levels of participants responding to surveys. Questionnaires were presented in the Google Form tool. Volunteers replied on access links sent directly to their e-mails and WhatsApp's.

3.5 Reliability and Validity of the Research Instruments

Reliability refers to the consistency of a measurement process. When measurement equipment or a method regularly assigns the same score to individuals or items of equal worth, it is termed reliable. As a result, a measure is valid if it accurately measures what it is intended to measure while excluding irrelevant factors. This is supported by the fact that validity is a broad concept that cannot be assessed definitively in any single statistic, and that this instrumental testing quality is typically misunderstood even more than reliability. To confirm the questionnaires' validity and reliability, a pre-test was done on 10% of the population prior to the study to ensure that they understood and could answer the questions (Thanasegaran, 2009).

3.6 Data Analysis Methods and Procedures

This study used quantitative methods of data analysis. The questionnaire was coded according to each study variable to ensure that the margin of error was minimal and that the data was accurate during analysis. The descriptive statistics were used to conduct the quantitative analysis, which provided answers to all of the study questions. Pandas is a Python library that imports and analyzes data.

Panda's data frame. `corr()` was used to find the pairwise correlation of all columns in the data frame. Any Null Values (NAN) were automatically excluded and any non-numeric data type columns in the data frame were ignored. A mass of raw data was transformed into charts, tables with frequency distribution and percentages, which is a vital part of making sense of the data (Peck et al., 2015).

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Questionnaire Return Rate

Questionnaire completion rates are the proportion of the sample that participated as intended in all the research procedures. In the study, 100 questionnaires were administered and 94 respondents filled and returned. This questionnaire return rate reflected the best findings for the researcher.

4.2 Demographic Data

There were 94 observations from the respondents. The highest number of observed online shoppers were Male with a frequency of 69 (73%) as opposed to their Female counterparts who were 25 (27%). Between Ages 26-35 years had the highest frequency of 49 (53%). On education level, Masters had the highest frequency of 49 (53%) and on Income level between USD 100 – 1000 had the highest frequency of 44 (47%).

Table 1: Demographic Data

	Gender	Age(Years)	Education	Income
COUNT	100	100	100	100
UNIQUE	2	4	4	4
TOP	Male	Age 26-35	Masters	USD 100 - 1000
FREQ	69	49	49	44

Source: Research data (2021)

Hence, males intensely read product pages and spend more time on third-party review sites hence enhancing their shopping behavior as compared to their female counterparts. Online shopping is mostly adopted by millennials i.e. Age 26-35 since they are growing up during the technological period with the existing computers and cell phones hence quick adoption. Therefore, merchants and marketers focus their products and services on the millennial consumers to maximize their sales since they have minimal challenges in using online platforms. Masters Students were the majority since the millennials found majorly in master's classes are technology-oriented who have adopted online shopping.

Most of the respondents earned between USD 100-1000 because they majorly come from the younger generation who interact more with these online businesses since most of them do not have the monetary power to own a credit card, conning will be difficult.

4.3 Correlations of Determinants of Online Shopping

4.3.1 Perceived Usefulness

The strongest relationship was between Online-shopping allows buying of products/services that are not available in a certain geographical location and shopping online gives additional information about products/services than the traditional way of shopping with a correlation of 0.758721.

Table 2: PU Correlation

	Faster and saves time	Saves money	Easy shopping decisions	Offers more information about products /services	Provides better deal	Purchase of specific products/services	Buy products/services that do not exist in the geographical location
1	1.000000						
2	0.143692	1.000000					
3	0.679247	0.340451	1.000000				
4	0.267148	0.236228	0.332886	1.000000			
5	0.110838	0.031853	0.409257	0.488795	1.000000		
6	0.304632	0.163100	0.389687	0.583824	0.735887	1.000000	
7	0.163935	0.299060	0.241106	0.758721	0.584605	0.695529	1.000000

Source: Research data (2021)

Key: 1-Faster and saves time. 2-Saves money. 3-Easy shopping decisions. 4-Offers more information about products /services. 5-Provides a better deal. 6-Purchase of specific products/services. 7- Buy products/services that are not available in the geographical location.

A platform is perceived useful when it offers more information about products/services and allows Buying of products/services that are not found in the geographical location. Marketers should therefore fill their platform contents with more useful information about their products and services to help the consumers Buy products/services that are not present in the geographical location.

4.3.2 Perceived Ease of Use

The strongest relationship was between learning how to shop online is easy and most online shopping platforms are easy to use with a correlation of 0.706135. However, others have weak relationships like comparing products/services from different vendors is easy with online shopping. and most online shopping platforms are easy to use have a correlation of 0.184637 and below.

Table 3: PEoU Correlation

	The majority of internet purchasing systems are simple to use	It is simple to learn how to shop online	Products/services available on most online shopping platforms	Comparing products/services from different vendors is easy with online buying	The platforms provide assistance with online shopping	Most online shopping platforms are easy to use
1	1.000000					
2	0.706135	1.000000				
3	0.423077	0.465407	1.000000			
4	0.325893	0.292111	0.597471	1.000000		
5	0.352224	0.268379	0.122513	0.389279	1.000000	
6	0.661892	0.59328	0.539319	0.184637	0.058565	1.000000

Source: Research data (2021)

Key: 1- The majority of online shopping platforms are simple to use, 2- It is simple to learn how to shop online., 3- Products/services available on most online shopping platforms, 4- Comparing products/services from many suppliers is much easier with online shopping, 5- Help during online shopping is available through the platforms, 6- Most online shopping platforms are easy to use.

The study concluded that online shopping platforms are perceived as easy to use when the consumers find the platforms easy to learn and use. The online shopping merchants should therefore make their platforms easy to learn and use since it draws more customers towards using their platforms. It reduces their efforts in navigation as opposed to a website that is difficult to navigate thus leaving the consumers with a choice of sticking to the platform that is easy to learn.

4.3.3 Attitude

The highest relationship was between shopping using online Platforms and it is valuable to use platforms in online shopping with a correlation of 0.211975; however, the relationship is weak.

Table 4: Attitude Correlation

	Like shopping using online platforms	It is valuable to use platforms in online shopping
1	1.000000	
2	0.211975	1.000000

Source: Research data (2021)

KEY: 1- Like shopping using online platforms, 2- It is valuable to use platforms in online shopping.

Liking to shop using online platforms does not necessarily mean that consumers find it valuable to use platforms during online shopping. Hence merchants should add value to their platforms e.g. in terms of improving their trust to enhance the consumer's attitude towards online shopping.

4.3.4 Behavioral Intention

The highest relationship was between Intent to continue shopping online in the future and First, look for a product/service in an online store with a correlation of 0.902616. However, there are others with weak relationships as Revisiting online shopping platforms previously purchased on an Intent to shop from platforms that I have not previously used with a correlation of 0.179605 and below.

Table 5: BI Correlation

	Intent to continue shopping online in the future	Intent to shop online very often	Revisiting online shopping platforms previously purchased on	First, look for a product/service in an online store	There is a chance to buy the same product online like the one I buy in an ordinary store	There is a chance to buy the different products online from the one I buy in an ordinary store	Intent to shop from platforms that I have not previously used	Mostly prefer to shop online than going to a physical store	The loading time of online shopping platforms is fast
1	1.000000								
2	0.676604	1.000000							
3	0.840001	0.522912	1.000000						
4	0.902616	0.561891	0.714762	1.000000					
5	0.875312	0.516047	0.682879	0.733782	1.000000				
6	0.678364	0.341148	0.594835	0.561857	0.686441	1.000000			
7	0.277373	0.496423	0.179605	0.192993	0.300687	0.313614	1.000000		
8	0.676042	0.636806	0.552362	0.733741	0.557986	0.570168	0.228098	1.000000	
9	0.787273	0.587085	0.659599	0.708766	0.692488	0.859567	0.181482	0.765664	1.000000

Source: Research data (2021)

KEY: 1- Intention to do more online shopping in the future. 2- Having a strong desire to shop online on a regular basis, 3- Re-visiting previously purchased internet shopping sites. 4- Look for a product or service in an online store first. 5- There's a chance I may buy the same merchandise I buy at a regular store online. 6- There's a chance I'll buy something different online than I would in a regular store. 7- Intention to shop on platforms that I haven't used before, 8- Mostly prefer online shopping than visiting a physical store. 9- The loading time of online shopping platforms is fast.

Hence, a consumer would first; look for a product/service in an online store and Intent to continue shopping online in the future.

4.3.5 Customer Service

The highest relationship was between online shopping platforms provide on-time delivery and online shopping platforms provide Customer support with a correlation of 0.707511. However,

for others, which have a weak relationship as online shopping platforms provide on-time delivery and online shopping platforms provide refund policy with a correlation of 0.35906 and below.

Table 6: CS Correlation

	Online shopping platforms provide on time delivery	Online shopping platforms provide Customer support	Online shopping platforms provide refund policy	Online shopping platforms provide product guarantee
1	1.000000			
2	0.707511	1.000000		
3	0.35906	0.641629	1.000000	
4	0.417029	0.678621	0.449215	1.000000

Source: Research data (2021)

KEY: 1- Online shopping platforms provide on-time delivery, 2- Online shopping platforms provide Customer support, 3- Online shopping platforms provide refund policy, 4- Online shopping platforms provide product guarantee.

Hence, when an online shopping platform provides customer service by providing on-time delivery.

4.3.6 Platform Security

With a correlation of 0.873793139, the biggest association was between private data would be appropriately protected while shopping online and legal standards protect online purchasers. However, for others, which have a weak relationship, personal data will be properly protected when purchasing online and online payment is safe on platforms with a correlation of 0.455251454 and below.

Table 7: PS Correlation

	When making an online purchase, personal information will be kept safe	Legal norms protect online buyers	Online shopping platforms are trusted	Online shopping platforms deliver the exact product bought	Online payment is safe on platforms
1	1.000000				
2	0.873793139	1.000000			
3	0.845783507	0.859245098	1.000000		
4	0.667850573	0.659457354	0.737043474	1.000000	
5	0.455251454	0.592574653	0.731276709	0.788337215	1.000000

Source: Research data (2021)

KEY: 1- When shopping online, personal information will be safe, 2- Online buyers are protected by legal guidelines, 3- Online shopping platforms are trusted, 4- Online shopping platforms deliver the exact product bought, 5- Online payment is safe on platforms that I use. As a result, when legal rules protect online buyers, personal data will be appropriately protected when shopping online.

4.4 Reliability Analysis

Cronbach's alpha reliability coefficients typically range from 0 to 1, with higher values suggesting greater dependability. The extent of elements measuring the same underlying characteristic is determined by this.

Table 8: Cronbach's Analysis (Key Factors)

	Cronbach's Alpha
Perceived Usefulness	0.820106
Perceived Ease of Use	0.792733
Attitude	0.714047
Behavioral Intentions	0.880973

Source: Research data (2021)

Perceived Usefulness has a reliability of 82%, Perceived Ease of Use has a reliability of 79%, Attitude has a reliability of 71% and Behavioral Intention has a reliability of 88%.

Hence, the leading construct as per TAM Model is Behavioral Intention. Attitude has the least reliability of 71%, which is the least compared to other determinants.

Table 9: Cronbach’s Analysis (External Factors)

	Cronbach’s Alpha
Customer service	0.834642
Perceived security	0.904892

Source: Research data (2021)

Customer Service has a reliability of 84% and Perceived Security has a reliability of 90%. The study observed and concluded that Customer Service and Perceived Security have high reliabilities and hence considered as determinants of TAM.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Achievements

Objective 1: To identify the opportunities and challenges in online shopping among postgraduate students.

The steady growth of online shopping in recent years, which has attracted more local players, marketplaces adapting to the local context and traditional brick and mortar businesses becoming active, have been met with various opportunities and challenges.

There were various dominant opportunities identified. They included; the *Access to the internet* in Kenya because of improved infrastructure and affordability. *Alternative online payments solutions* with the most popular domestic methods of e-commerce payments being M-Pesa, Airtel Money, T-Kash and Equitel. *Logistical solutions* as players such as Lori Systems, Kobo360, Sendy and Amit Truck stepped in to provide the crucial last-mile delivery logistic and *Regulations and Governance* as Kenya has not enacted laws to offer protection for consumer buying and selling rights on the Internet.

The challenges identified included; *Lack of trust among consumers* since there have been cases of online fraud from many online shops hence instilling fear into the hearts of buyers. The *Literacy level* as managing e-commerce operations may require new skills and competencies that companies lack, particularly smaller firms and *E-commerce Infrastructure* faced challenges is limited coverage of national fiber infrastructure and limited internet penetration, especially in rural areas.

Objective 2: To identify a suitable framework for online shopping.

The study, out of other models: UTAUT, TRA, TPB, used the TAM to investigate determinants of online shopping during the Covid-19 pandemic. It is because TAM being widely used to analyze one's attitude towards intention to use new technologies since the act of shopping is a behavioral act and online shopping is dependent on technology. The model included the following main determinants namely Perceived Usefulness, Perceived Ease of Use, Attitude and Behavioral Intention.

The Technological Acceptance Model (TAM) has extensively studied individual technology acceptance behavior in numerous types of information systems. The papers reviewed on TAM-related Online shopping showed that this is a key model in the assessment of use, behavior and attitude of online shopping. Despite the model's influence in information systems research,

especially online purchasing platforms, the model primarily relies on perceived usefulness as the most acceptable metric, ignoring real technological use (Nistor et al., 2014).

Objective 3: To evaluate the identified framework among the study population.

The study evaluated the beliefs about Perceived Ease of Use, Perceived Usefulness, Attitude Behavioral Intentions, and External Factors: Customer service, Platform Security was included in the model to rationalize buyers' online shopping behavior and to highlight important factors for online purchases. A statistical analysis of the conceptual model was performed, as well as a survey of 94 online shoppers. Relationships were put to the test and found to be true.

The study used CSFs, which were studied before in previous work as external factors to interact with the major model of technology acceptance to understand the effect of these factors in online shopping. It has proved that PU, PEoU, Att, BI, CS and PS all support Online shopping.

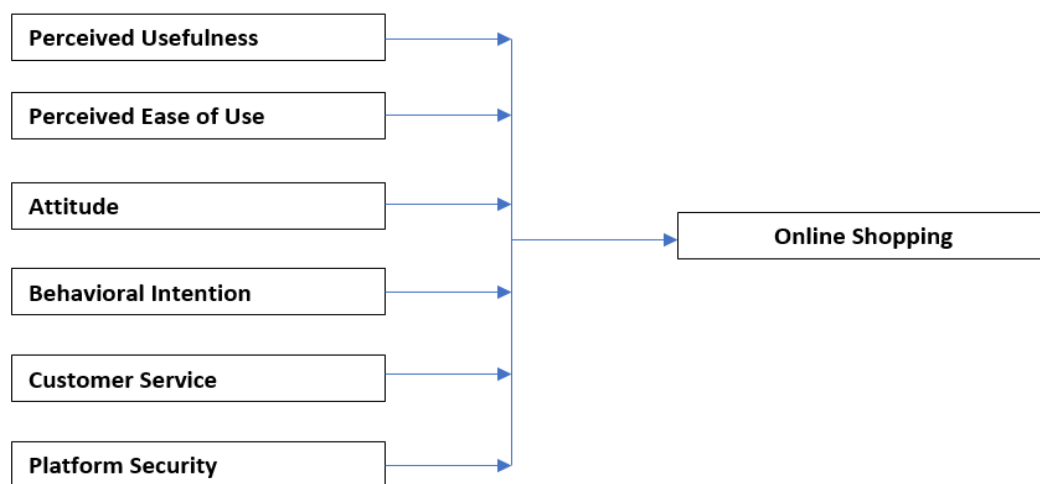


Figure 6: Online Shopping Framework

5.2 Conclusion

Kenya has consistently grown as one of Africa's most vibrant e-commerce ecosystems. Disruptive technologies including artificial intelligence, robotics, blockchain, drones, the Internet of Things, big data, and software-enabled industrial platforms have the potential to have a significant impact on economic development. M-Pesa, for example, changed the financial industry by considerably increasing financial inclusion and opened the door to new business models and prospects such as Pay-Go, digital credit, and betting as a result of taking use of current opportunities.

The paper entails the study of the study of a few key variables. The study is an extension of the TAM by adding two more variables; Customer Service and Platform Security. Future researches may include other such variables that have an impact on online shopping behavior.

5.3 Recommendations

The study shows that there are many online shopping platforms in the market and some more are yet to join the markets, however, only those that have incorporated the current developments will survive to post the pandemic. Hence, take advantage of the present opportunities to make online shopping better.

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APPENDIX

Questionnaire

A framework for Online Shopping among Post Graduate Students during COVID-19.

Please use a few minutes to answer the following questions pertaining to the utility, perceived usefulness, Usability and General adoption of online shopping. All respondents remain anonymous.

Personal Information

- A. Gender: Male
 Female
- B. Age(Years): Age 18-25
 Age 26-35
 Age 36-45
 Over 45
- C. Education Level: Doctor of Philosophy
 Fellowships
 Masters
 Postgraduate Diploma
- D. Income: No Income
 Below USD 100
 USD 100 - 1000
 USD 1000 - 5000
 Above USD 5000

Determinants of Online Shopping

Perceived Usefulness (PU)

1. Online shopping allows me to make purchases more quickly and saves me time.
2. I save money by shopping online.
3. Online shopping makes it simple for me to make purchases.
4. When compared to traditional shopping, online shopping provides me with more information about items and services.

5. Shopping online allows me to get a better deal.
6. It is possible to purchase certain products/services via online shopping.

Online shopping helps me to purchase products and services that are not available in my local area.

Perceived Ease of Use (PEoU)

1. The majority of online purchasing systems are simple to use.
2. It's simple to learn how to shop online.
3. On most online buying sites, I can simply find the goods or service I'm looking for.
4. Comparing products/services from different vendors is easy with online buying.
5. I can get assistance from the platforms if I need it while purchasing online.

The majority of online purchasing platforms have straightforward navigation.

Attitude (ATT)

1. I like shopping using online Platforms
2. I think it is valuable to use platforms in online shopping

Behavioral Intension (BI)

1. In the future, I plan to continue purchasing online.
2. I intend to do a lot of my shopping online.
3. I keep going back to online purchasing sites where I've made previous purchases.
4. When I require a product or service, I look for it first in an online store.
5. There's a chance I could buy a product online that's identical to one I'd buy in a regular store.

There's a chance I'll be able to buy a different thing online than I would at a regular store.

Customer Service (CS)

1. I use online buying sites that arrive on time.
2. Customer service is available on the online buying platforms that I use.
3. I use online shopping platforms that have a refund policy.

Product guarantees are provided by the online purchasing platforms that I use.

Perceived Security (PS)


1. When shopping online, I trust that personal information will be adequately protected.
2. Online buyers are protected by legal guidelines.
3. Online shopping platforms that I use are trusted
4. Online shopping platforms that I use deliver the exact product that I have bought

Do you have any other issue that you will like to be reviewed in your online shopping experience?

***The end of survey. Please make sure there is no question left out. Thank you for your cooperation.**

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This is to Certify that Miss. Everlyne Adhiambo Ojal of University of Nairobi, has been licensed to conduct research in Nairobi on the topic: Adoption of Online Shopping among Higher Learning Institution Students under Covid-19 Pandemic for the period ending : 24/June/2022.

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Introductory Letter



**UNIVERSITY OF NAIROBI
COLLEGE OF BIOLOGICAL & PHYSICAL SCIENCES
SCHOOL OF COMPUTING AND INFORMATICS**

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P. O. Box 30197
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Date: April 21, 2021

TO WHOM IT MAY CONCERN

EVERLYNE ADHIAMBO OJAL - P54/33847/2019

The above named is a student in the MSc in Information Technology Management of the University of Nairobi. As part of the requirements of the programme, the student is required to undertake a research project and write a report. The project title for the student is: Adoption of Online Shopping Among Higher Learning Institution Students under Covid-19 Pandemic.

Any assistance regarding data collection accorded to the student, who is under my supervision, will be highly appreciated.

A handwritten signature in blue ink, appearing to read 'Chris A. Moturi'.

CHRISTOPHER A. MOTURI

SENIOR LECTURER

SCHOOL OF COMPUTING AND INFORMATICS