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Working Paper

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Working paper ICTD, No. 04/23

Suggested Citation: Makoza, Frank (2023) : E-commerce and entrepreneurship for African Continental Free Trade Area (AfCFTA): A readiness conceptual framework, Working paper ICTD, No. 04/23, African Continental Free Trade Area (AfCFTA), Accra, Ghana

This Version is available at:

<https://hdl.handle.net/10419/268464>

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E-commerce and entrepreneurship for African Continental Free Trade Area (AfCFTA): A readiness conceptual framework

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2023

Abstract

African governments have ratified the African continental free trade area (AfCFTA) to support elimination of tariffs and taxes on intra-African trade on goods, services and investment; and promote integration that can lead to socio-economic growth. This paper proposes a readiness conceptual framework of electronic commerce and entrepreneurship. The study highlighted factors that African countries may consider to fully reap the benefits of the African continental free trade area. The factors include technology, legal frameworks, infrastructure, social norms, culture, economy, politics and entrepreneurship. The proposed readiness conceptual framework can be validated in further studies. The study contributes towards literature on e-commerce and entrepreneurship in the context of AfCFTA.

Keywords: African continental free trade area, e-readiness, e-commerce, entrepreneurship

1. Introduction

About 81% African countries have ratified African continental free trade area. Among the objectives of AfCFTA are to create a single continental market for goods and services, eliminate trade tariffs, improve efficiency and support socio-economic development (Tralac, 2023). It is perceived that digital technologies will support the changes in free movement of goods and people, creation of services, establishing new business and promote investment (Apiko, Woolfrey & Byiers, 2020; Fafunwa & Odufuwa, 2021). Hence, AfCFTA can enhance electronic commerce (e-commerce) where products and services are offered and purchased over the internet and improve trade. Further, AfCFTA will promote creation of new business opportunities through entrepreneurial activities that are significant in the context of African countries to support employment creation and economic growth (Constand & Gilbert, 2011; Fofack & Mold, 2021; Parshotam, 2018).

African countries face challenges in trade within the continent. The challenges include lack of infrastructure, restrictions in trade including quota and licences, high tariffs and taxes, inadequate foreign currencies, political and social instability (El Baz, Laguir, & Stekelorum, 2019; Nnamdi & Owusu 2014; Razzaque & Gosset, 2015). While there have been efforts to collectively address challenges related to trade at continental level, recent ratification of AfCFTA is expected to create opportunities and collaborations that will improve trade and enhance the continent's participation in the global supply chain (Buckley, 2009; Okunade & Ogunnubi, 2021).

There have been debates on continental integration among scholars. The previous studies have looked at the regional level collaborations among African countries (e.g. The Eastern Africa Community, The Economic Community of West African States and the Southern Africa Development Community). The studies have addressed some issues related to trade, digital technologies and regulation, value-adding, free movement policies among others (Dick & Schraven, 2019; Nshimbi & Fioramonti, 2014; Okom & Udoaka, 2012; Okunade & Ogunnubi, 2021). Other authors have pointed out challenges in implementation of free-trade regional-blocs and highlighting concerns of security, irregular migration, resistance of powerful countries, lack of proper management of borders and inability to understand border security and border defence; and potential threats of terrorism (Dick & Schraven, 2019; Fayomi & Ibhawoh, 2016; Okunade & Ogunnubi, 2021). However, readiness of African countries in relation to e-commerce and entrepreneurship in the context of AfCFTA remains unclear (Ismail, 2020). This leaves limited understanding of how prepared the African countries are, in the era of AfCFTA to enhance e-commerce and entrepreneurship (Songwe, Macleod & Karingi, 2021; Ismail, 2020).

Given the knowledge gap identified above, this study draws concepts from theories on e-readiness, e-commerce and entrepreneurship to explain factors that should be considered for African countries to fully participate and reap the benefits of AfCFTA. The study focused on the context of African countries and identified areas of e-commerce and entrepreneurship that will require attention in the AfCFTA. Literature was reviewed on the topic, and a readiness conceptual framework was proposed, and potential areas of further research highlighted.

2. Background to the study

2.1. African continental free trade area

African countries have natural resources (e.g. minerals, crude oil, gas, timber, animal products and raw agricultural produce) that can be sold and used in different economic sectors across the globe (Okunade & Ogunnubi, 2021). Despite having large volume of resources some African countries do not benefit from the trade of the natural resources and remain in low-income status. African countries have ratified the AfCFTA to improve their trade activities and achieve economic growth (Parshotam, 2018). The 55 countries began the process in 2012 during the 12th African Union meeting. The initial negotiations began in 2015 and as of October 2022, about 44 of the 55 countries (about 81%) signed the agreement of AfCFTA (Tralac, 2023). Figure 1 summarises the countries that have ratified the AfCFTA agreement.

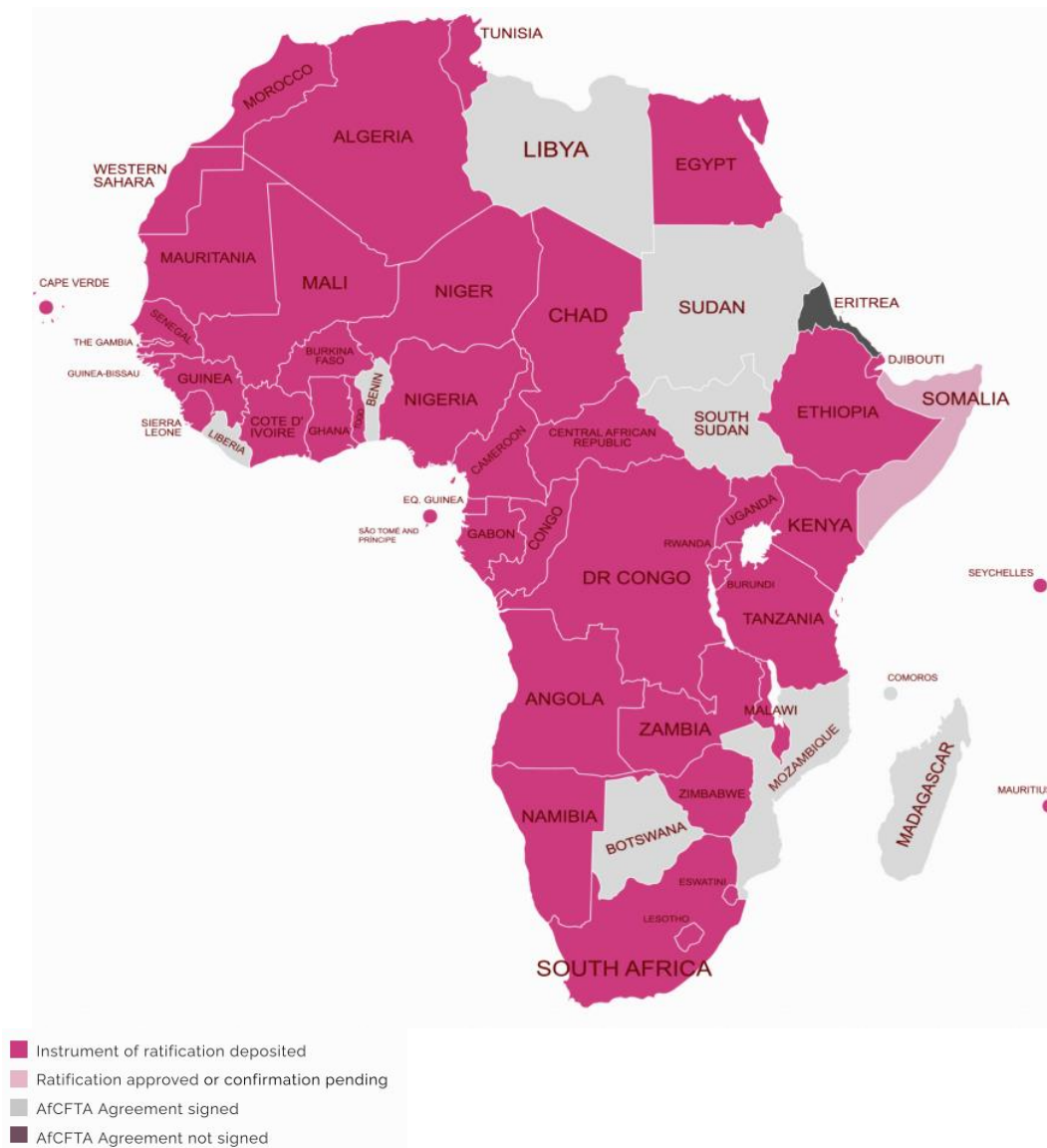


Figure 1: Summary of AfCFTA members (Tralac, 2023)

Some of the objectives of AfCFTA are to allow free movement of goods, services, investments and people (Albert, 2019). Further, the AfCFTA will also facilitate intra-trade among the African countries. The member states believe that AfCFTA will steer industrialisation and create opportunities for the African citizen and achieve socio-economic growth (Okunade & Ogunnubi, 2021; Parshotam, 2021). AfCFTA has three main layers (a) goals and purposes - the intentions of the continental free trade area is to support free trade, movement of people and goods and support social economic-growth (2) protocols for trade - supporting trade for goods and services by providing rules and procedures for dispute settlement, competition and intellectual property rights (3) instructions of protocols - step by step details on the implementation of the protocols e.g. related import duties, tariff reductions plans etc (Albert, 2019). AfCFTA also has institutional arrangements that were created to support the operations and activities of the organisation. The institutions include Assembly of Heads of states, the Council of ministers, the secretariate, the committee of senior trade officials (Albert, 2019).

Since 2012, trade between countries in Africa has improved and it is believed that it will affect the upstream and downstream operations in global supply chains. Further, there has been growth in ICT infrastructure investments to support trade and other economic activities. The continent is expected to achieve higher domestic growth product value (GDP) than developed countries (Asongu & Odhiambo, 2019; Signe & van der Ven, 2019).

2.2.Opportunities and challenges of AfCFTA.

There are perceptions that AfCFTA will create opportunities for African countries (Albert, 2019). Some of the opportunities of AfCFTA are supporting infrastructure investments and use of existing infrastructure (e.g. railways, water transport, roads, air routes) to support cross-border trade. It is also believed that AfCFTA will facilitate development of trade standards and harmonised trade practices among the participating countries. African countries can increase the volume of exports to other countries without restrictions. There are expectations of increase of exports for palm oil, maize, tobacco, rice and sugar. AfCFTA members will benefit from the removal of import and export tariffs thereby creating the opportunity to increase volume of imports and exports (Signe & van der Ven, 2019). This can lower the prices of products and services and crease demand. Consumers can have access to more products. AfCFTA is also promoting standards and procedures of customs and clearing, improving transportation and linkages to the global supply chain (Parshotam, 2018). Another opportunity of AfCFTA is potential for job creation through Micro Small Medium Enterprises. The youth can use internet to access a large market for products and services across borders. AfCFTA would also support growth of sectors including agriculture, mining, financial services and energy (Fofack & Mold, 2021; Morgan, Farris, & Johnson, 2022). Multinational companies and local companies can collaborate in development of new technological innovations. The arrangement can enhance transfer of new technologies and best business practices (Albert, 2019).

AfCFTA has also challenges that will require African governments to address. The challenges include security concerns, irregular migration, resistance of powerful countries, lack of proper management of borders and inability to understand border security and border defence; and potential threats of terrorism (Dick & Schraven, 2019; Fayomi & Ibhawoh, 2016; Okunade & Ogunnubi, 2021). Another challenge is that micro small and medium enterprises may

incur high trading costs in the context of cross-border trade and cannot compete with large multinational companies. The sudden fall of trade tariffs can affect revenue generation of African government and impacting their national budgets. This can constrain public infrastructure investment and delivery of public services due to lack of financial resources. Another challenge is labour mobility where people can move to more productive sectors and leaving other sectors to become unproductive. Corruption is also one of the problems of cross border trade that lead to losses in government revenue. Another challenge of cross-border trade is rules of origin (determining the origin of a product so that preferential tariffs can be assigned to a product) which can discourage entrepreneurs to trade (Albert, 2019; Fafunwa & Odufuwa, 2021; Fayomi & Ibhawoh, 2016). Anti-competition practices among business organisation in the countries pose a threat to the development of AfCFTA (Kigwiru, 2020). It is suggested that AfCFTA alone cannot address the complex problems in Africa but must be aligned with national plans and complemented other efforts including education and training, simplified trade regimes and infrastructure investments e.g. financial systems, energy, technology and research (Albert, 2019; Signe & van der Ven, 2019).

2.3. Entrepreneurship in context of AfCFTA

Entrepreneurship can be defined as a process in which opportunities for creating new good and services are explored, evaluated and exploited (Shane & Venkataraman, 2000). In other words, entrepreneurship supports innovation, job creation, wealth creation and productivity growth (Constand & Gilbert, 2011; Xolani, Mlambo & Mkhize, 2022). Entrepreneurship is often viewed at individual level as a people's behaviour in being able to identify opportunities, willing to take risks in establishing new businesses. It is important to also recognise entrepreneurship as activities that support innovation, value creation in organisations and growth in economies (Galindo-Martin, Costano-Martinez & Mendez-Picazo, 2019; Schillo, Persuad & Jin, 2016).

Entrepreneurship readiness factors can be examined at individual level and at system-level e.g. regional and national level. Examples of factors at individual level include capability and willingness of individuals to identify opportunities, taking risks and willing to invest their time and resources in creating new businesses. Other factors include personal networks and business skills. The national level factors for entrepreneurship readiness are government policies, laws, regulations, business support programs, industrial standards, success to suppliers and customers, funding programs, highly-skilled labour, high-quality universities that support innovation (Schillo, Persuad & Jin, 2016).

2.4. Electronic commerce in context of AfCFTA

Electronic commerce or e-commerce is the processes of sharing business information to support transactions and maintaining relations using the Internet (Baoteng, Heeks, & Molla, 2011). E-commerce brings together individuals or organisations that offer products or services and consumers that buy the services and products. The internet is important in facilitating information sharing, payments and maintaining relationships among the producers and consumers (Kshetri, 2007). E-commerce can be categorised based on parties involved in the processes. These include business to consumer (b2c), business to business (b2b), consumer to consumer (c2c) and mobile commerce (m-commerce) (Berenji, Wang & Guerra-Zubiaga, 2019).

In Africa, e-commerce is growing and creating a potential for entrepreneurs to trade across borders (Ismail, 2019). E-commerce can create opportunities for local entrepreneurs to access large markets, reduce red tape when transacting and generate data that can be used for understanding customers in different parts of the continent (Banga, Gharib, Mendez-Parra & Macleod, 2021; Lemma, Mendez-Parra & Naliaka, 2022). E-commerce in Africa is still lagging behind compared to development countries and require further understand of the factors that can support the development of e-commerce in the context of AfCFTA (Ismail, 2019).

Readiness of e-commerce of can be understood in consideration of factors related to government, technology, market forces and culture (Alsaad, Mohamad, Taamneh, & Ismail, 2018). Ismail (2019) also noted that in the e-commerce in the context of AfCFTA require four crucial areas: enabling factors, facilitation factors, market access, delivery and aftersales. Enabling factors relate to factors that must be present for e-commerce to take place (e.g. logistical infrastructure, internet access, legal infrastructure, digital skills etc) (Banga, Macleod, & Mendez-Parra, 2021). Facilitating factors are related to electronic payments and require digital payment systems, digital identification and government legislations. Market access is related to cross-border delivery ad require to consider custom duties, valuation and pricing and movement of people. After sale services relate to trust that can be reflected in understanding of consumer rights and protection, feedback and settlement of disputes (Ismail, 2019). The readiness factors are crucial for African countries to consider in order to gain the benefits of e-commerce. There are perceptions among the African governments and international development agencies that e-commerce will grow in Africa and create job opportunities for the citizens and contribute towards economic growth (ITC, 2019; Signe & van der Ven, 2019).

3. Theoretical perspective to the study

There was no single technology readiness theory that captured well the themes or constructs of interest in the study: readiness for e-commerce, entrepreneurship and continental free trade area. Combining constructs from different theories can address limitations and enhance better explanation of the phenomena (Ngulube, Mathipa & Gumbo, 2015). Hence, theoretical underpinning informing the study was a combination of constructs from e-readiness (Boateng, Heeks, Molla & Hinson, 2011), entrepreneurship models (Alvarez, Urbano & Amoros, 2014; Levie & Autio, 2008) and the EPIC framework (Srinivasan, Stank, Dornier & Peterson, 2014). Each of the construct informing the conceptual framework are summarised in the subsequent subsections.

3.1. Electronic readiness

Electronic readiness “*is a measure of the degree to which a country, nation or economy may be ready, willing or prepared to obtain benefits which arise from information and communication technologies*” (ICTs) (Dada, 2006). E-readiness has been explained in many ways including different levels of society e.g. at country level, organisational level and among individuals (Heeks, 2010; Molla & Licker, 2005). The focus in this study will be e-readiness at country level because continental trade area comprises countries and regional blocks (Ismail, 2019).

There is diversity in the factors for determining e-readiness among scholars. For instance, Molla and Licker (2005) note e-readiness factors in the context of e-commerce in developing

countries. The factors include awareness of the business environment, commitment of management and leaders, availability of human capacity, technology resources, business resources, governance of business activities, market forces, industry support and government services. Other studies have also noted factors of business to business e-commerce that are necessary for organisations, and they are legal, economic, political and cultural factors; transportation and electronic payments (Alsaad, Mohamad, Taamneh, & Ismail, 2018; Boateng, Heeks, Molla & Hinson, 2011; Okoli & Mbarika, 2003). It can be observed that these studies complement understanding of e-readiness for technologies in addition to studies that use indices (Schlichter & Danylchenko, 2014). However, the concept of entrepreneurship is missing in the suggested factors.

3.2. Global Entrepreneurship Monitor Model

Constructs from the Global Entrepreneurship Monitor (GEM) model (Alvarez, Urbano & Amoros, 2014; Levie & Autio, 2008) were considered to complement the e-readiness factors. The GEM model describes the processes and factors that are necessary for achieving economic growth and creating job opportunities. The factors include social, cultural and political context that are linked to general national framework conditions (GNF) and entrepreneurial framework conditions (EFC). The GNF have similar factors of e-readiness (e.g. Internal and external Trade openness, financial markets, technology, infrastructure, management skills, labour markets and institutions) while the EFC include financial, government policies, government programs, education and training, research and development transfer, commercial, legal infrastructure, international market openness, access to physical infrastructure, cultural and social norms. It is assumed that the availability of the EFCs can lead to entrepreneurial opportunities and enhance skills and motivation among the entrepreneurs. New business and opportunities can also support national development (Alvarez, Amoros & Urbano, 2014; Levie & Autio, 2008; Schillo, Persuad & Jin, 2016).

3.3. EPIC framework

The EPIC framework (Srinivasan, Stank, Dornier & Peterson, 2014) can be used to assess the readiness of supply chains in four dimensions: economic, political, infrastructure and competence. Economic component attempts to assess the wealth and resources of a country or region in relation to production and consumption of goods and services. Political components relate to the state of formation of public policies and enforcement of laws and regulations to support the business environment. Infrastructure component related to organization and physical resources of society and organisations that facilitate the function of the economy. Competency relates to the ability of actors in the supply chain to perform and achieve their goals (Helms, LeMay & Dwyer, 2017; Srinivasan, Stank, Dornier & Peterson, 2014).

3.4. Comparing the three theories

In our analysis, we attempted compare the themes from four studies that addressed the three areas of focus in the study: e-commerce, entrepreneurship and continental free trade area. We The construct from each theory was coded and later counted. Table 1 summarises the concepts in studies selected for the conceptualising readiness of e-commerce and entrepreneurship in the context of ACFTA.

Table 1: Summary of selected studies for comparison

	E-Readiness		E-Commerce	GEM model	Epic framework
No.	Molla & Licker (2005)	Baoteng, Heeks, Molla & Hinson (2008)	Alsaad, Mohamad, Taamneh & Ismail (2018)	Alvarez, Urbano & Amoros (2014)	Srinivasan, Stank, Dornier & Peterson (2014)
1	Awareness of the business environment	Legal	Legal	Internal and external Trade openness financial markets	GDP and GDP Growth rate
2	Commitment of management and leaders	Economic	Economic	Technology	Population size
3	Availability of human capacity	Political	Political	Infrastructure	Foreign Direct Investment
4	Technology resources	Social cultural	Cultural factors	Management skills	Exchange rate stability & Consumer PI
5	Business resources	The state	Transportation	Labour markets	Balance of Trade
6	Governance of business activities	Institutional	Electronic payments	Institutions	Ease of doing business
7	Market forces	Development actors	-	Financial	Legal and regulatory framework
8	Industry support	Developing country firms	-	Government policies	Risk and political stability
9	Government services	Community level	-	Government programs	Intellectual property rights
10	-	-	-	Education and training	Transport infrastructure
11	-	-	-	Research and development transfer	Utility infrastructure
12	-	-	-	Legal infrastructure	Telecommunication and connectivity
13	-	-	-	International market openness	Labour relations
14	-	-	-	Access to physical infrastructure	Education level
15	-	-	-	Cultural and social norms	Logistics competence
16	-	-	-	Commercial infrastructure	Customs and security

There were about 57 constructs from the five selected studies (listed in Table 1). The constructs were re-categorised into technological, legal, infrastructure, social, cultural, political,

business and economic factors. It was assumed that the factors were necessary for understanding the context of e-commerce and entrepreneurship in the context of AfCFTA. The constructs under each category were counted to note their distribution. Figure 1 summarises the count of constructs for the selected studies.

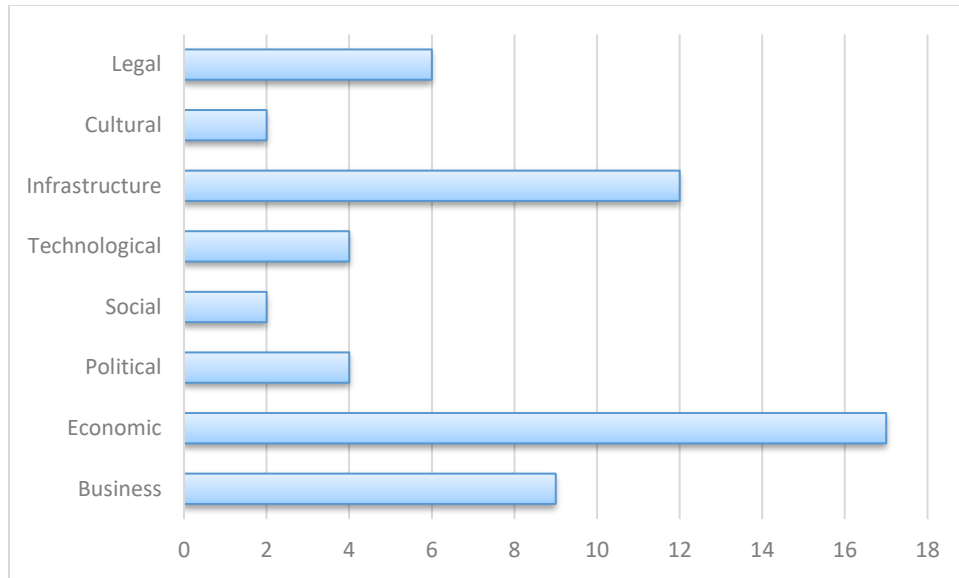


Figure 1: Number of codes for the themes

As can be seen in Figure 1 above, there were few themes of cultural and social factors from the selected studies. Infrastructure factors and economic factors had the highest count of codes. This may mean that the selected studies concentrated infrastructure and economic factors. For instance, Baoteng, Heeks, Molla and Hinson (2008) in their study identified economy as one of the significant factors for e-readiness. Alsaad, Mohamad, Taamneh and Ismail (2018) also highlight economy as one of the factors that should be considered in the context of e-commerce. The researcher was cautious of the need to consider the constructs with low values (e.g. social and culture factors) that could also affect e-commerce and entrepreneurship (Alvarez, Urbano & Amoros, 2014).

In attempt to understand the relationship between the themes that emerged in the analysis of the eight papers, common sub-themes were noted relation to the context of free trade area, e-commerce and entrepreneurship (See Table 2). Our assumptions were that understanding of the sub-themes in relation to the three areas can better explain e-commerce and entrepreneurship in the context of AfCFTA. For example, Molla and Licker (2005) identified technology as an important factor in adoption of e-commerce. Alvarez, Urbano and Amoros (2014) identified technology as one of the factors that can promote development of entrepreneurship. Other studies have also identified technology as an enabler for both e-commerce and entrepreneurship in organisations and at national level (e.g. Constand & Gilbert, 2011; Schillo, Persuad & Jin, 2016). While these studies explain the relationship between e-commerce and entrepreneurship, the current study addresses the relation of the context of

AfCFTA where entrepreneurs, organisations and countries can trade without restrictions (Helms, LeMay & Dwyer, 2017). Table 2 summarises the common thematic areas of e-commerce and entrepreneurship in the context of AfCFTA.

Table 2: Summary of common thematic areas

Theme	Sub-themes	Continental Free trade area	e-commerce readiness	Entrepreneurship
Technology	Teledensity (Mobile phones and internet)		x	x
	Level of e-commerce		x	
	Level of education, research & innovation	x	x	x
Legal frameworks	Laws and regulation	x		x
	Technology related laws		x	
	Government policies	x	x	x
Infrastructure	Transport infrastructure	x	x	x
	Utilities infrastructure		x	x
	Logistics & customs	x	x	x
Social norms	Labour relations			x
	Control of corruption	x		x
	Gender equality		x	
Culture	Cultural norms and values	x	x	x
	Traditional/Survival	x		x
Economy	Population size	x	x	x
	GDP and GDP growth rate		x	x
	Ease of doing business			x
	Exchange rate stability		x	
Political	Political context	x		x
	International cooperation	x		
	Electronic participation	x		x
Business	Degree of entrepreneurship		x	x
	Business development and management		x	x
	Education and training		x	x
	Research and innovation		x	x

Alvarez, Urbano & Amoros, 2014 noted that socially supporting culture can support development of entrepreneurial activities in a country. Social norms and values that promote equal opportunities for all citizens e.g. allow entrepreneurship for women, men and the youth can support development of trade in a country. Boateng, Heeks, Molla and Hinson (2008) also highlight the importance of culture in the development of e-readiness in the context of developing countries. Similarly, Alsaad, Mohamad, Taamneh & Ismail (2018) highlighted culture as one of the factors to be considered in the development of e-commerce. From these examples, a context where social norms and value promote pursue of equal opportunities for all can also allow individuals to access opportunities using digital technologies and participate in cross-border e-commerce activities (Bugingo, 2018).

Ismail (2019) suggested that while trade protocol and standards were important, ICT infrastructure is a crucial component that would support more businesses to establish their online presence. The infrastructure will allow businesses to perform other processes in the e-commerce value chain e.g. e-payments, deliveries and after sale services (Ismail, 2019). This was consistent with other studies that identified technology as one of the necessary factors for e-commerce adoption (Boateng, Heeks, Molla & Hinson, 2008; Molla & Licker; Okoli & Mbarika, 2003).

Another interesting theme was for business development where governments and other development partners can support development of businesses, research and innovation. The role of government extend to politics where those in political leadership in the different countries across the continent can collaborate with other countries (Levie & Autio, 2008; Srinivasan, Stank, Dornier & Peterson, 2014). There are also specific areas that require collaboration e.g. e-payments, cybersecurity for e-commerce; standards and protocols for trade; laws and regulations for legal frameworks; and ease of doing business, market openness for business development in the context cross-border trade (Alvarez, Urbano & Amoros , 2014; Bugingo, 2018).

4. Proposed conceptual framework

E-readiness factors (Boateng, Heeks, Molla & Hinson, 2011) and the GEM model (Alvarez, Urbano & Amoros, 2014; Levie & Autio, 2008) and the EPIC framework (Srinivasan, Stank, Dornier & Peterson, 2014) had an overlap in themes. For instance, themes related to technology, infrastructure, economy, business and political factors. Although the themes addressed different issues related to e-commerce, entrepreneurship and continental free trade area, we identified components that could complement each other in understanding readiness of e-commerce and entrepreneurship in the context of AfCFTA. Figure 1 summarises the proposed conceptual framework (AfCFTA e-commerce and entrepreneurship readiness framework).

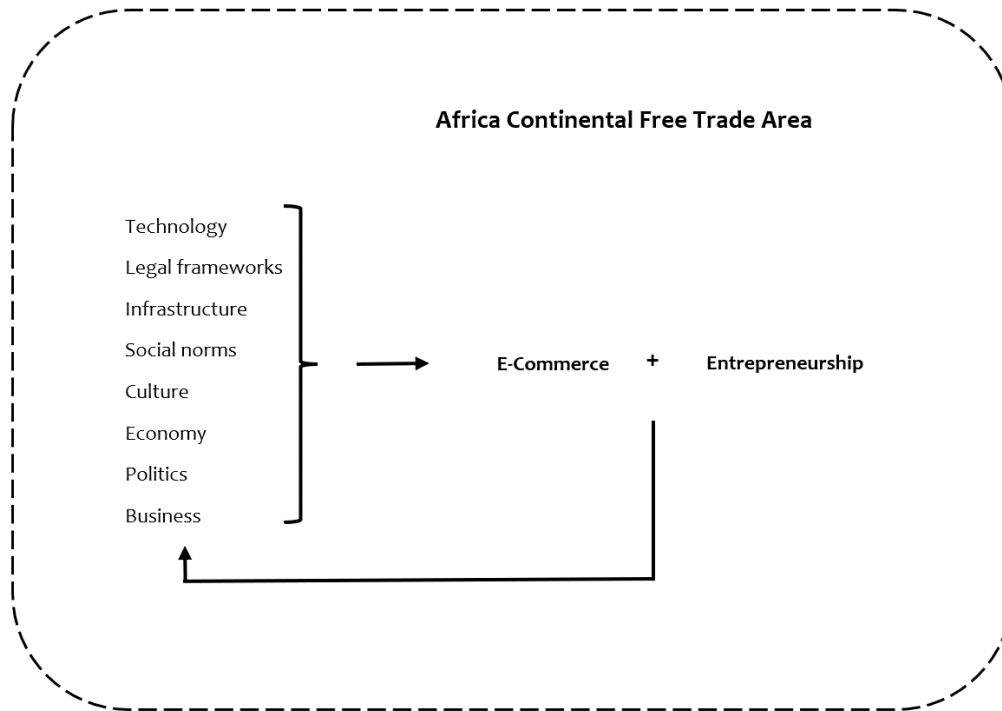


Figure 2: Proposed AfCFTA e-commerce and entrepreneurship readiness framework

The description of each construct in the proposed conceptual framework are summarised as follows:

- **Technology factors:** E-commerce and entrepreneurship in the context of AfCFTA will require technology to support cross-border trade in promoting of products and services, processing of transactions and managing after sales services (Ismail, 2019; Kshetri, 2007). Technology factors in this context may be known through understanding the status of teledensity (percentage of users of internet or mobile phones per 100 people), level of e-commerce, level of education, capacity for research and innovation of a country (Atkinson, 2019; Baoteng, Heeks, Molla & Hinson, 2008).
- **Legal frameworks:** Laws and regulations are necessary to govern how trade is conducted in the context of AfCFTA. The aim of the laws is to protect the interests of producers, traders and consumers because there can be misuse of information of consumers. Legal frameworks may support enforcement of safety practices in e-commerce. For instance, laws and regulations can support enforcing Know Your Customers and prevention of money laundering and financing of terrorism to minimize risks (Ajambo & Emebinah, 2021). Legal frameworks factors can be assessed considering the cross-border trade laws and regulations, technology related laws (e.g. Data protection laws and Cyber security laws) and government policies on ICT, e-commerce and financial services (Kigwiru, 2020).

- **Infrastructure factors:** Infrastructure relates to physical facilities and services that should be available to support trading, services and consumers to access to products and services in the context of AfCFTA (Apiko, Woolfrey & Byiers, 2020). The infrastructure factors may include transport infrastructure (land, water and air freight) for delivery of products, utilities infrastructure including electricity, gas, broadband internet etc. for supporting trade processes and activities (Fofack & Mold, 2021). Logistics and customs that can support efficient movement and delivery of products from producers or sellers to consumers and ensure that proper tariffs on products are maintained (Ismail, 2020). The state of infrastructure of a country can be assessed by establishing the level presence of transport, access to utilities and efficiency of logistics and customs services (Helms, LeMay & Dwyer, 2017).
- **Social norms:** Social factors are important in the context of AfCFTA because there is diversity of business practices across the continent of Africa. Social norms can support development of trust between trading partners and consumers when trading in the context of AfCFTA. Social factors can be assessed by checking the presence of labour relations laws, procedures for preventing and controlling corruption. It is also important to understand the presence of policies and programs for promotion of gender equality where men and women should have equal opportunities to participate in cross-border ecommerce (Mbaya, Mudida & Omwenga, 2020).
- **Cultural factors:** The values that people hold when conducting cross-border trade are significant in the context of AfCFTA. The values that people hold can be presented in the digital content to promote products and services and enhance diversity in the context of AfCFTA (Vlassis, 2020). Further, the values that people hold can be protected through intellectual property rights. The culture factors assessed by checking the state of norms and values of a country or business context, traditions that can be promoted and protected; and presented in innovations (Adebola, 2020).
- **Economic factors:** The process of production of goods and services from raw materials and how the good and services are consumed was significant in the context of AfCFTA. The number of people who can work in the various economic sectors and have disposable income to acquire products and services was a crucial the development of e-commerce (Baoteng, Heeks & Molla, 2011; Maliszewska & Ruta, 2020). Further, the economic environment was significant for the development of entrepreneurship where the processes of doing business are clear and simple. The economic environment should also have a stable exchange rate for transacting to ensure that business can operate at a profit (Constand & Gilbert, 2011; Schillo, Persuad & Jin, 2016). Economic growth indicators can be used to assess the status of an economy.
- **Political factors:** Politicians can play an important role in supporting policies and making decisions that can affect the development of e-commerce and entrepreneurship in the context of AfCFTA. The politicians also facilitating engagement of stakeholders and

collaboration with other countries in the continent (Dick & Schraven, 2019; Helms, LeMay & Dwyer, 2017). Consumers can also participate in electronic forums that debate and discuss issues that affect their lives and influence the decisions of politicians that represent their interests AfCFTA institutions (Mbaya, Mudida & Omwenga, 2020).

- **Business factors:** Creation of new businesses to address the identified needs in the market can be affected by the level of business development, business skills of the entrepreneurs, education and training available and research and innovation (Alvarez, Urbano & Amoros, 2014; Schillo, Persuad & Jin, 2016). Digital entrepreneurship can enhance the development of e-commerce where new business models can be developed to take advantages of digital technologies e.g. large access to markets and ability of customers to choose from a large range of products and services on offer (Galindo-Martin, Costano-Martinez & Mendez-Picazo, 2019). Indicators for ease of doing business can be used to understand the level of business development environment of a country. The availability of training programs for business development and capacity of a country to conduct research and come up with innovations can be useful in establishing the level of business development of a country (Levie & Autio, 2008; Schillo, Persuad, & Jin, 2016).

In summary, the proposed conceptual framework concentrates on eight factors that can affect the e-commerce and entrepreneurship in the context of AfCFTA. These are legal, culture, infrastructure, technological, social, political and economic factors. Our assumptions on the identified factors were that they should not be viewed in isolation and that they can influence each other. For instance, e-commerce and entrepreneurship can also influence the individual factors (e.g. technology, infrastructure, legal frameworks, culture, social factors etc.). The conceptual framework can offer better explanation when describing readiness of African countries in the context of AfCFTA (Ngulube, Mathipa & Gumbo, 2015; Tan, Srinivasan, Lyytinen & Grover, 2008).

5. Discussion and conclusion

The aim of the study was to conceptualise an e-readiness framework for e-commerce and entrepreneurship in the context of Africa Continental Free Trade Area. The findings of the study showed that legal, culture, infrastructure, technology, social, political, entrepreneurship and economic factors can describe the readiness of African countries in the AfCFTA. The factors emerged from previous studies that looked at e-commerce (Boateng, Heeks, Molla & Hinson, 2011; Molla & Licker, 2005), Global Entrepreneurship Model (Alvarez, Urbano & Amoros, 2014; Levie & Autio, 2008) and EPIC framework (Srinivasan, Stank, Dornier & Peterson, 2014). Although the studies addressed different theoretical aspects of the area of interest, there was some overlap in some of the constructs (recall Table 2).

The findings showed that technology was one of factors that was crucial for e-commerce and entrepreneurship for readiness of countries in the context of AfCFTA (Ismail, 2019). Access to digital technologies is crucial for buying and selling of products and services over the internet. African countries have seen increase in number of internet users via mobile devices. The situation is likely to create opportunities for organisations to access more customers across borders using

e-commerce. Hence, there is also a need for governments to ensure that AfCFTA strategies support integration of technologies in cross-border trade activities including payment systems, supply chain systems, customs, transport systems and logistics to improve on efficiency (Baoteng, Heeks & Molla, 2011; Berenji, Wang & Guerra-Zubiaga, 2019).

Similarly, infrastructure was necessary for supporting producers to provide products and services for target markets in the context of AfCFTA. Consumers may also need infrastructure to buy products and services offered online. ITU (ITU, 2022) reports on the increase of mobile phone users Africa. This may mean that there are opportunities for consumers to be connected to the internet and participate in e-commerce and entrepreneurship. Other physical infrastructure such as roads, rail and waterways will be required to transport products from producers to manufactures; and from retailers to consumers in the context of AfCFTA. Hence, stable and reliable infrastructure is a prerequisite for successful e-commerce and entrepreneurship (Berenji, Wang & Guerra-Zubiaga, 2019).

The study also showed that legal frameworks were important in supporting regulations, standards and governance of e-commerce and business activities amongst entrepreneurs (Helms, LeMay & Dwyer, 2017). Legal frameworks can support implementation of laws related to cross-border payment systems, data protection, security of personal information and preventing financing of terrorist activities and money laundering in the context of AfCFTA (Kigwiru, 2020). Collaboration among politicians, private sector organisations and development partners is crucial to support the development of standards and governance of e-commerce and entrepreneurship in the context of AfCFTA (Timcke, 2022).

Beyond technology and infrastructure factors, the findings revealed that social factors can influence the way products and services are produced and consumed in the context of e-commerce. This was consistent with studies that suggest that social factors such as gender, education, family sizes, population, religious views or beliefs on products can affect the way producers and consumers participate in e-commerce in the context of AfCFTA (Atkinson, 2019; Parshotam, 2018). Producers and consumers in the different parts of the continent of Africa are affected by diverse social factors. For instance, differences in level of education among men and women can affect the way e-commerce is adopted (Saoilenko & Osei-Bryson, 2019). Similarly, in some countries women face challenges of equity to operate businesses in formal sectors (Xolani, Mlambo & Mkhize, 2022). It is important to be aware of these factors when considering e-commerce and entrepreneurship in the context AfCFTA (Schillo, Persuad & Jin, 2016).

The study was without limitations, the phenomenon of e-commerce entrepreneurship in the era of AfCFTA was relatively new and few but growing literature on the topic was available (e.g. Banga, Gharib, Mendez-Parra & Macleod, 2021; Ismail, 2019). The researcher is cautious of making generalisations to the whole African continent. The findings provide analytical generalisations where findings from the study can be compared with findings of studies from different parts of the continent (Guenther & Falk, 2021). The study offers good starting point for further studies summarises as follows:

- (a) Studies can be conducted to validate the proposed conceptual framework.

- (b) Studies can also analyse e-commerce and entrepreneurship readiness for AfCFTA of countries in different regional economic communities e.g. comparing countries from Southern Africa Development Community with East African Community or Economic Community of West African States
- (c) Another area of fruitful research can be comparing e-commerce and entrepreneurship in AfCFTA with other free trade areas e.g. European Union.

In summary, contextual factors plays an important role in the development of e-commerce. On the other hand, often entrepreneurship is associated with individuals and small businesses. In the study, literature was analysed and identified e-commerce and entrepreneurship readiness factors in the context of AfCFTA. The discussion was beyond individuals or small businesses; and looked at broader issues for a continental setting. The factors include technology, legal frameworks, infrastructure, social norms, culture, economy, politics and business. The study proposes a conceptual framework that can be validated in further studies. The paper add literature on e-commerce and entrepreneurship in the context of AfCFTA.

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