

A Review of the E-commerce Barriers Faced by the SMEs in Africa

Rusha M O Elsmeni^{1*}, AR Abdul Rahim², and Abdelgadir Mahmoud Mohammed³

^{1,2,3} RAZAK School of Engineering and Advanced Technology, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia

* rushaelsmani@gmail.com

Abstract: This paper aims to convey a review of the issues that Small and Medium Enterprises (SMEs) face when trying to ensure their alignment with the Electronic Commerce (E-commerce) in Africa. The paper defines the SMEs and E-commerce from different views and goes in a general discussion about the importance of e-commerce for the SMEs in both developed and developing countries. It has been noticed that African SMEs have been left behind; many reasons led to that left over. This has been a subject of research for the last few years worldwide, especially in developing countries. Through the literature review, the difficulties or barriers to adopt the e-commerce by the SMEs look apparently more or less the same with some differences when it comes to the country location, politics, environment and whether it is a developed or developing country. The study will also highlight the literature review of the mobile commerce (M-commerce) usage in Africa and the penetration of the smartphone in this continent and its effects on the e-commerce adoption. Africa was chosen for this review for many reasons including, but not limiting to its contribution role in the world economy and the availability of its business opportunities now and in the future. These business opportunities can reduce African unemployment issues. This study will concentrate on the African e-commerce adoption barriers faced by the SMEs and suggest solutions to facilitate the adoption process. The paper reviews and surveys the selected literature on the key factors affecting the e-commerce adoption by the African SMEs. The discussion clarifies the obstacles preventing African SMEs from introducing, applying and adopting successfully the e-commerce concept which are concluded as internal and external barriers. The paper could be very helpful for researchers, investors, policy-makers and whomever interested in the impact of e-commerce in African SME development.

Keywords: SMEs, E-commerce, Barriers, Africa

Paper type: Conceptual paper

1. Introduction

The contribution role of SMEs in all countries national economics is very well-known. However, in an era of globalizing economies, many markets become noticeably international and competitive. To align with this fast-growing market, all types of enterprises should follow the globalization wheel. E-commerce is considered as one of the critical mediums that support the large enterprises as well as SMEs to explore and browse the internal and external markets.

Small businesses are the backbone of many economies across the globe. The major challenge they face is how to overcome the factors hindering their growth (Barrow, 1998; Ghobakhloo *et al.*, 2011; Africa Guide, 2016; Mbatha, 2013). Small and medium enterprises (SMEs) in Africa is the main contributor in the national economies According to Araste (2013) the African's SMEs contribute significantly to the economies of the continent, representing almost 90% of the whole business opportunities and providing the main source of jobs and income for the African continent. He claimed that this number could be higher if informal SMEs were considered. E-commerce as a tool of development and globalization has faced a lot of obstacles to be adopted by the SMEs in terms of infrastructure, secure payment, supply chain, internet stability, owners' knowledge and experience, market accessibility, logistics and culture. The World Economic Forum reported, according to the International Monetary Fund (IMF) by Santos (2015), that for the last decade, the African economy has become an exciting frontier and by 2035, the number of Africans' youth population will exceed that of the rest of the world.

Africa is the world's oldest populated area and the world's second largest continent covering about over 30 million square kilometers. Africa has approximately 30% of the earth's remaining mineral resources with over 40% of the gold reserves, over 60% of the cobalt, and 90% of the platinum reserves and there is more than half of Africa's labor force working in food production (Boyes, 2013).

Africa is having a big boom in small and medium-sized enterprises (SMEs) to cover the jobs needed in the next few years. SMEs are now creating around 80% of the region's employment. The International Monetary fund IMF's Regional Economic Outlook for Sub-Saharan Africa, released in April 2015, said that, "Over the next 20 years ... sub-Saharan Africa will become the main source of new entrants into the global labor force." This point leads to a look on the recent and future business opportunities availability in the continent that guarantee the SMEs business sustainability. Based on the 2016 Africa Wealth report, most of the African's new millionaires are young entrepreneurs who have invested in African fast-growing economies sectors (Africa Weath Report, 2016). Those sectors are classified as the main business opportunities in Africa that could be a good chance for investors. Many business opportunities are still out there for SMEs in Africa, and below are the most important sectors this paper is discussing.

- *Solar power*; the most clean and abundant African natural resource that solves the electricity issue which covers most of the rural spaces in the continent.
- *Agribusiness*; which is the major potential source of rich entrepreneurs in 2016. The World Bank reported in 2016 that Africa will return 1 trillion dollars in 2030 from the agribusiness industry.
- *Smartphone*; Africa comes second in terms of the smartphones market after Asia.
- *Internet Access*; Africa is known to have the toughest climate that needs more intention when it comes to internet access which is the platform for any online process.
- *Education*; Africa is rich with creative and innovative talents where over 50% of its population is younger than 31 years old.
- *African Art*; in 2014, African's art has been sold in New York City at 41 million dollars.
- *Retail*; E-commerce market has grown very impressively in the last few years.
- *Apps and Online Services*; Africa's e-economy is growing impressively.

- *Payment Solutions*; Kenya and Tanzania are the leaders in the online payment services. Online payment service is one of the critical issues for all individuals and entrepreneurs. Africa yearly has as much as \$100 billion paid in cash in transactions.
- *Real Estate*; Angola, Nigeria, Egypt, Mozambique, South Africa and Kenya are considered as the key real estate markets on every investor's agenda.
- *Startup financing*; Africa's new generation entrepreneurs continue to suggest some impressive ideas that could strongly disrupt old and new e-markets.

E-commerce and M-commerce also show a great jump on Africa's SMEs business. As mentioned in the business opportunities in Africa, internet access, smartphones and online payments have the most e-commerce adoption aiding tool for SMEs success. M-Commerce could be viewed as a subset of e-commerce (Coursaris and Hassanein, 2002). GSMA Mobile 360 series' general director has reported that by mid-2016, 32 countries in Africa are using 72 live 4G networks. This number is half of what was used since 2014. Africa's forecast for smartphone penetration up to 2020 will exceed triple this number, rising from 226 million in the report time of 2015 to 720 million by 2020 (Okonji, 2016). Mobile subscriptions will rise in the next few years and it is powering innovation and entrepreneurship across Africa. The GSMA also claimed that at early 2016, 90% of the mobile growth will be led by the developing countries; as the mobile technology is already the dominant platform for internet access in many parts of the world, given the lack of alternative infrastructure (GSMA, 2016).

E-commerce is the medium of purchasing, selling goods, and providing services over the internet. Thus, e-commerce is viewed as an interactive tool between the business and its customers. The e-commerce adoption by firms has resulted in business volumes increment and lead time cut. Therefore, e-commerce can be used as the strategy for rapid business growth (Shynet and Hurasha, 2016).

In highlighting the business opportunities in Africa along with SMEs significance, the Internet and e-commerce are the competitive tools that allow SMEs to survive and gain competitive advantages over others. Good understanding of the drivers and barriers influencing the e-commerce adoption for African SMEs is the crucial success factor that leads the SMEs toward business sustainability. The paucity of research in the e-commerce adoption barriers that the SMEs face in Africa has made a gap in the SMEs business industry that needs attention. This paper covers the previous researches done concerning the e-commerce adoption barriers worldwide and particularly in Africa. The paper covers, in the upcoming sections, the SMEs and E-commerce definitions and the key role the e-commerce plays in the SMEs growth in Africa. The discussion and conclusion are presented to reveal the most crucial factors that act as barriers for the African's SMEs to adopt the e-commerce with some suggested solutions.

2. Literature Review

A. *Small and medium enterprises (SMEs)*

Small and medium enterprises (SMEs) have been defined with a wide range of definitions and measures by many researchers, organizations and countries through the last years by very close definitions in different ways of thinking, according to different rules and country conditions. Hatten (2012) claimed that the SME includes everything from home business to factory workers, reaching the owner of a chain of fast food restaurants. However, Leopoulos *et al.* (2006) discussed that the geographical placement of the SMEs and the country legislation influences determine the SME definitions.

With regards to African countries, there are many different definitions for SMEs. Mamman *et al.* (2015) reported that Ghana bank defined SMEs as the enterprises with assets of €25 million (not including the land) and €5 million in constant 1988 prices. The idea of defining SMEs is very crucial when the informal SMEs are considered. The African Informal SMEs are those firms with employed and self-employed workers who work legally but use cash or barter as an exchange medium. Unfortunately, most of the Africans SMEs fell in this category.

From all reviews, each SME will be defined differently according to its country. SMEs could be defined according to its sector (manufacturing or services) plus the firm's full-time employees number (differ from one country to another) and a discrete number of sales turnover.

B. E-Commerce

E-commerce's start was in 1960's through the electronic data interchange (EDI) to share business documents with other companies. A big growth happened between 1980s and the 1990s when eBay and Amazon took place in the e-commerce industry. People nowadays can buy endless online products and goods (Mensah *et al.*, 2005). Jansen (2016) discussed the ubiquity of e-commerce and its blurry lines. He mentioned that some people understand e-commerce as "buying stuff online", while for others, it covers a much wider range of activities, including online purchases of physical products and services. Also, e-commerce could be defined as per Mensah *et al.*, (2005) as the buying and selling of information, products and services via the computer networks which make up the Internet. The UNCTAD adopted the e-commerce definition of the OECD in 2011 which claimed that e-commerce is "the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders". The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online. An e-commerce transaction can be between enterprises, households, individuals, governments, and other public or private organizations. Orders could be made over the web, extranet or electronic data interchange. E-commerce applications used could be worked for both devices and smartphones, where the importance of m-commerce comes, and mobiles subscriptions and smartphones penetration rates matter. The type is defined by the method of placing the order, excluding orders made by phone calls, facsimile or e-mail (UNCTAD, 2015).

Form the literature review, E-commerce is the buying, selling or exchanging goods or services over an interface device network with an internet availability, through a device based application or a mobile based application to facilitate the sales transactions electronically without including the delivery of the products.

C. E-commerce benefits for SMEs

Electronic commerce or e-commerce is also known as mobile commerce (M-commerce) when the Mobile phone is the media of communication and social commerce (s-commerce) when social media are used as the communication tools.

E-commerce has five categories based on the two peripherals in the transaction process (UNCTAD, 2015; Peet *et al.*, 2002; Goldstein and O'Connor, 2000);

- B2B (Business-to-business): when transaction/s is/are between Enterprises
- B2C (Business-to-consumer): when transaction/s is is/are between an enterprise and an individual
- C2C (Consumer-to-consumer): when transaction/s is/are between individuals
- G2B (Government-to-business): when transaction/s is/are between an enterprise and a government
- Coop2Coop (Cooperation-to-Cooperation): when transaction/s is/are between cooperative organizations.

The growth of e-commerce, m-commerce and s-commerce was relatively slow for many reasons: Internet penetration limitations, low level of awareness and limited communication infrastructure (Mensah *et al.*, 2005). The previous studies summarized the e-commerce benefits and impact for the SMEs as follows: Kartiwi (2006); Jones *et al.*, (2003)

- Access to new markets.
- Cost and time saving (physical, time and space limitations).
- Connections and quality improvement.
- Communication improvement between consumer and seller.
- Minimizing supply chains, transport obstacles, and delivery costs.
- Strategic improvements.

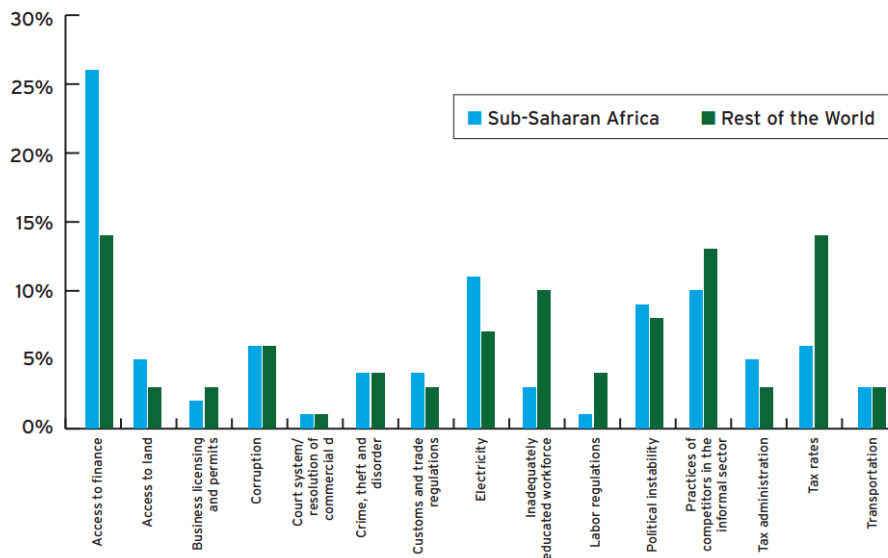
D. SMEs, E-commerce Adoption Barriers in Africa

The African continent is so rich and diverse in terms of culture which differs not only from country to country but also within one country. The African continent is very diverse linguistically, with an estimated 1500 to 2000 languages. Most of Africa's cultural activities are concentrated on the family and ethnic groups. People across the continent are remarkably diverse by any measures of languages, religions, way of living and wide range of economic activities (Africa Guide, 2016).

Africa is a developing continent which is pleasantly rich with all life basics, but it still has some difficulties to grow in the SMEs business area and the adoption of the e-commerce, similar to the rest of the world. E-commerce adoption barriers faced by SMEs were reviewed among all small and medium enterprises and compared with each other, concentrating on the African continent. There is a reasonable amount of studies and publications done by researchers in this field, but unfortunately, few studies have concentrated their efforts in the African continent. According to Boyes (2013), African SMEs need more care in the next few years as the continent's population will be more than double to 2.3 billion people by 2050. SMEs are offering more than 90% of the total job opportunities in Africa compared to the large enterprises.

Beck and Cull (2014) discussed the SMEs growth barriers in Sub-Saharan Africa with a comparison to the rest of the world and came up with the below figure which explained the similarity and differences with the other countries.

Figure 1. Obstacles of SMEs' operation and growth, an international comparison



Source: Beck and Cull (2014)

Table 1. shows the study's results regarding the difficulties faced in adopting e-commerce by the SMEs. The table illustrates the general factors (barriers) both worldwide and in Africa.

Table 1. E-commerce adoption barriers globally and in Africa review.

| Barriers | Research Area | Reference |
|--|------------------------------------|---|
| <ul style="list-style-type: none"> • External Barriers: <ul style="list-style-type: none"> ○ Customer / Supplier Pressure ○ Competitors Pressure ○ External Support ○ Organizational Barriers ○ Financial Barriers ○ Legal and Regulatory Barriers ○ Economic Barriers ○ Sociopolitical Barriers ○ Electronic authentication issues; and ○ Bandwidth capacity and infrastructure issues ○ Problems related to logistics ○ Lack of transparency in government support programs ○ Poor advice from user support representatives • Internal Barriers: <ul style="list-style-type: none"> ○ Perceived benefit ○ Compatibility ○ Cost ○ Security, Trust, and Privacy Concerns ○ Technology Readiness ○ Firm size ○ Owner Innovativeness ○ Owner IT experience ○ Owner IT Ability ○ Behavioral Barriers ○ Technical Barriers ○ Cognitive Barriers ○ Lack of awareness and knowledge of e-commerce; ○ Lack of skill and time to investigate and implement ecommerce; ○ Technology ‘phobia’ amongst proprietors; ○ Poor business management generally, as evidenced by a lack of strategic direction or perspective. ○ Language Barrier ○ Perceived Costs ○ Organizational Readiness | Developed and Developing Countries | Rahayu and Day (2015), Saif-Ur-Rehman (2016), Jansen (2016), Pease and Rowe (2003), Shemi (2012), Jones <i>et al.</i> (2003), Ahmad <i>et al.</i> (2015), Araste (2013), Savrul <i>et al.</i> (2014), UNCTAD (2015), Zheng and Wang (2012), Wang and Hou (2011), Jones (2013), Taylor and Murphy (2004), Al-Bakri and Katsiolouides (2015), Wilson (2008), Hajli (2014), Kapurubandara and Lawson (2006), Lawrence and Tar (2010) |

-
- Problems related to logistics
 - limited use of credit cards
 - Problems between ISP and telecoms supplier: who is responsible for service failures/problems?
 - **External Barriers:**
 - Money Transfer
 - Exclusion from international e-marketplaces
 - Difficulties with international banking transactions
 - Access to credit
 - Low e-commerce usage by customers and suppliers
 - Inexperience with sales tax and import duties
 - Sociopolitical barriers
 - Internet Access and Connectivity.
 - Online fraud
 - Legal and regulatory barriers
 - political barriers
 - Social and culture barriers.
 - The remaining digital divide
 - Logistics (speed and timeliness of delivery)
 - **Internal Barriers:**
 - Location factors
 - Infrastructure deficit.
 - Compatibility
 - Firm size
 - High cost
 - Weak finance
 - Owners characteristics and knowledge
 - Employees knowledge (technical)
 - Unconvinced benefits to the company
 - Confidentiality of information
 - Logistics (speed and timeliness of delivery)
- Africa Howe (2015),
Cloete (2002),
Zaied (2012),
Awa (2015)
, Awiagah
(2015),
Fjose(2010),

Most of the factors (barriers) indicate the normal fear to adopt a new technology. The regional SMEs have a tendency not to appreciate the opportunities the Internet can provide. Mainly, the factors that affect the e-commerce adoption could be divided into two groups: External Barriers that are defined as the factors which come from outside the firm such as competitor pressure, government support, environmental issues, etc. and Internal Barriers such as the owner characterization, firm infrastructure, cost, etc.

3. Discussion

The literature review conveyance indicates that when it comes to the e-commerce adoption factors, it looks the same globally. In addition, there are more barriers in the case of Africa:

- Money transaction (security, fraud, and internet connectivity)
- Exclusion from international E-market (world trust in Africans, save goods delivery and sanctioned countries)
- Little external pressure from suppliers, customers or competitors
- High Infrastructure cost
- System incompatibility
- Inexperience in sales and taxes
- Technical barriers (limited access to online database)
- Internet Access and Connectivity
- Knowledge exposure for both owners and employees
- Government Support and Sociopolitical barriers (governments frequent change and races conflicts)
- Language barrier (based on colonial)
- Internet Security (money transfer and online information exchange)
- No clear legal and regulatory rules
- Location and Environmental Barriers (differ from one country to another)
- Currency instability
- Crime and Corruption (most are due to Africa economics and politics)

Some of the upper barriers are referred as external factors that are coming from outside the firm and affect directly the firm's operations and processes. The internal factors refer to the factors from inside the firm and need development to allow the adoption of the e-commerce within the SMEs systems. The literature review of previous researches covered some global external and internal factors for both developed and developing countries. In the case of Africa, Internet connectivity and access is the most critical factor facing the SMEs in Africa, as it is the infrastructure for all e-commerce processes. Internet connectivity is one of the areas that need more intention in Africa with its high Internet growth and smartphone penetration rate (Nyirenda-Jere and Biru, 2015). Problems and not trusting the financial transactions and online security affect directly the adoption rate of the e-commerce in African SMEs (Awiagah *et al.*, 2015). The external pressures from SMEs customers, competitors and suppliers have a direct influence in the adoption of e-commerce, as SMEs should be at the same page with them if they need to sustain their business. Africa is experiencing low external pressure from their customers, suppliers and competitors. Moreover, blocking by the Global E-market (banking barrier) is a result of the negative perceptions about doing business in Africa, since even if their goods are listed and sold, the companies would be unable to pay for them (Howe, 2015). Being excluded from the global e-market is caused by another reason which is the US sanctions as in the Sudan case. African governments still have a lack of support for SMEs in terms of policies, developments and culture; the elements that affect negatively on the SMEs development and technology adoption level. Africa is also experiencing a frequent governmental change with different races (conflicts of interest), and this makes the rules and standards to be in frequent change respectively. With no regulatory system, no simple procedures and guidelines, lack of e-commerce standards and lack of e-trading legislation, the e-commerce will be a real challenge for the SMEs in the continent. The location and environmental barriers are creating challenges among the continent and the effect of the global economy. With the regional trade agreements in place, there will be low labor cost and unexpected market changes that power the consumers. Civil war, politics and economy lead to crime and corruption that affect the credit access directly for SMEs in Africa, where the rate of crime and corruption is relatively high than the rest of the world (Mahembe, 2011). Another factor that could affect the e-commerce adoption by SMEs in the African continent and could be essential and critical for all SMEs is the hard currency's rapid fluctuation and the power given to the black market. Goods and services will not have fixed prices if they are measured against the other continents' market; this could lead to customer dissatisfaction and less trust. Hard currency exchange rate is one of the difficult topics to make deals with.

For example, the US dollar has changed dramatically in Sudan, fluctuating up and down, and this fluctuation makes it difficult to any SME to decide adopting any US dollar-paid technology. African countries have been colonized differently, and all colonized countries speak the colony language as a second language. This language difference acts as a barrier to the knowledge exposure and low level of communications globally and with other African countries.

Internal barriers always differ according to the countries' culture, politics, and technology adoption rate and their leaders' technical backgrounds. Basic IT and high technology infrastructure cost play an essential role as the influencing factors to not adopt e-commerce by African SMEs. The compatibility within the SMEs refers to the extent of the appropriateness of e-commerce with the technology infrastructure, culture, value and work practices that already exist in the firm (Ghobakhloo *et al.*, 2011). African SMEs suffer from their firms' incompatibility systems. African SMEs owners' mindset should change to understanding the perceived benefit when adopting e-commerce in their firms. Most of the time, the owners are the managers and the firm's decision makers as well, and the things that make the innovativeness, IT experience and IT knowledge are the determinant factors in accepting any new technology or adopting existing ones. Both the inexperience in sales and taxes along with the technical barriers are very common factors to be found in Africans firms, and they caused by the lack of support from the governments and local institutions which are not doing enough to create local services and structures in support of small businesses.

The external and internal factors are affecting African SMEs' adoption rate to e-commerce very obviously. Moreover, there are some other observed factors that could be included for future research areas such as the effects that families and races have over business. In Africa, people are much more influenced by families and races than other nations. Families and races have power over the businesses, which make family or races business riskier than others.

Some simple ideas can help in overcoming many of the barriers facing the e-commerce adoption in Africa. Africans could use the Internet wisely and intensively to reach and communicate their services and goods to the E-market and keep an eye on the activities going on in order to not be left behind. Using old technology and infrastructure for Internet connectivity (3G instead of 4G) and IT infrastructure (modems, cables, labs, etc.) will save money and keep connectivity right and on. Awareness volunteer groups that make presentations and workshops for SMEs committees could raise the e-commerce importance and awareness level with a hidden agenda of raising the competition. They should develop the people's mindsets and use the promote from within technique, which means developing people in terms of IT knowledge and give them more responsibilities with recognition. This technique could raise the IT knowledge and save money of hiring newcomers.

Africa has different cultures and lifestyles. In order for the e-commerce to fit effectively into the African firms, SMEs businesses should fit the people's needs. Medical appointments are very sensitive to time and patient situation. A home business could suggest fees for an electronic medical service, where the patient specifies his/her need, situation, location and emergency and the electronic database suggests the nearest medical center, medical specialist availability and reservations. Likewise, businesses like catering, in-city transportation, private ambulance, tourism, schools selection help, wedding planning and African arts are still not organized well in Africa and need to use e-commerce to develop.

Some organizations are ready to adopt the e-commerce and very willing to improve and be exposed to the global e-market. As an example, in Sudan, the tourism organizations believe in the high sales return of this business and are very willing to adopt e-commerce to improve with the pleasure of showing Sudan's historical parts in organized activities (Nubian pyramid visits in the North, Nile cruise passing by Almugran, visiting the dams along the Nile going up to south Egypt, and Albijrawia pyramids). Family businesses as well are most welcome to systemize their firms electronically to prevent any family considerations or misuse. The social crowd funding project is the concept of collecting funds from small sources to finance a business or project. Social crowd funding projects started in some African countries

after their independency and stopped when they became corrupted. IT facilities could help these projects come back to life again, more powerful, effective and secure than before.

4. Conclusion

This paper contributes to future research. The paper discussed the importance of SMEs in general and highlighted its importance and contribution in the African economy. Furthermore, it discussed the E-commerce relevance benefits to the SMEs and how it could help in the SMEs development progress. E-commerce adoption by SMEs in Africa is facing issues that are holding back the e-commerce adoption probability. These barriers were discussed along with the observed ones and solutions were suggested to overcome them.

Africa is a very special continent with all of its unique blend of people, culture, climate and economy. There are many hurdles for SMEs to adopt the e-commerce technology, and Africa is facing the same challenges and more due to the continent's environmental differences. Both Internal and External factors in Africa were discussed in this paper's body where they act as barriers against the e-commerce adoption process by the SMEs in Africa. The African economy is harshly affected by these obstacles. By addressing the e-commerce adoption issues, the governments and regional organizations should make it a priority to act in order to catch the technology train. Some solutions have been discussed by previous researches for all SMEs in developing countries and in this paper, some other solutions are suggested for African SMEs as a special case. The foundation of any sustainable entrepreneurship in Africa depends on the continuous empowerment of regional SMEs and young entrepreneurs. African governments should work closely and monitor the development process of SMEs and provide their full support to adopt new technologies to be aligned with the global market.

References

- Africa Guide (2016), "African people and culture", available at: <http://www.africaguide.com/culture/>
- Africa Weath Report. (2016), "The Africa 2016 wealth report", available at: <http://www.smallstarter.com/get-inspired/top-11-business-opportunities-in-africa-for-2016/>
- Ahmad, S.Z., Abu Bakar, A.R., Faziharudean, T.M. and Mohamad Zaki, K.A. (2015), "An empirical study of factors affecting e-commerce adoption among small-and medium-sized enterprises in a developing country: Evidence from Malaysia", *Information Technology for Development*, Vol. 21 No. 4, pp. 555-572.
- Al-Bakri, A.A. and Katsioloudes, M.I. (2015), "The factors affecting e-commerce adoption by Jordanian SMEs", *Management Research Review*, Vol. 38 No.7, pp. 726-749.
- Araste, A.R. (2013), "The factors affecting the e-commerce adoption in smes in the industrial towns of zanzan-iran: managers' perspectives", *International Journal of Academic Research in Business and Social Sciences*, Vol. 3 No.10, pp. 100.
- Awa, H.O., Awara, N.F. and Lebari, E.D. (2015), "Critical factors inhibiting Electronic Commerce (EC) adoption in Nigeria: A study of operators of SMEs", *Journal of Science and Technology Policy Management*, Vol. 6 No.2, pp. 143-164.
- Awiagah, R., Kang, J. and Lim, J.I. (2015), "Factors affecting e-commerce adoption among SMEs in Ghana", *Information Development*, Vol. 32 No. 4, pp. 815-836.
- Barrow, C. (1998). *The essence of small business*: FT Prenticehall.
- Beck, T. and Cull, R. (2014), "Small-and medium-sized enterprise finance in Africa. Africa Growth Initiative", working Paper 16, Brookings, Washington DC.

- Boyes, S. (2013). "Getting to know Africa: 50 interesting facts", available at: <http://voices.nationalgeographic.com/2013/10/31/getting-to-know-africa-50-facts/>
- Cloete, E., Courtney, S. and Fintz, J. (2002), "Small businesses' acceptance and adoption of e-commerce in the Western Cape Province of South Africa, *The Electronic Journal on Information Systems in Developing Countries*, Vol. 10 No. 3, pp. 1-13.
- Coursaris, C. and Hassanein, K. (2002), "Understanding m-commerce: a consumer-centric model", *Quarterly Journal of Electronic Commerce*, Vol. 3, pp. 247-272.
- Fjose, S., Grünfeld, L. A. and Green, C. (2010), *SMEs and growth in Sub-Saharan Africa: Identifying SME roles and obstacles to SME growth*, MENON Business Economics.
- Ghobakhloo, M., Arias-Aranda, D. and Benitez-Amado, J. (2011), "Adoption of e-commerce applications in SMEs", *Industrial Management and Data Systems*, Vol. 111 No. 8, pp. 1238-1269.
- Goldstein, A. and O'Connor, D. (2000), "E-commerce for development", working Paper No 164, OECD Development Center, Paris
- GSMA. (2016), "The mobile economy 2016", available at: www.gsma.com
- Hajli, N., Sims, J. and Shanmugam, M. (2014), "A practical model for e-commerce adoption in Iran", *Journal of Enterprise Information Management*, Vol. 27 No. 6, pp. 719-730.
- Hatten, T. S. (2012), *Small Business Management: Entrepreneurship and Beyond*: Cengage Learning.
- Howe, J. (2015), "International e-commerce in Africa: The way forward", available at: <http://www.intracen.org/publication/International-E-Commerce-in-Africa-The-Way-Forward/>
- Jansen, M. (2016), *Bringing SMEs Onto the E-Commerce Highway*, ITC, Geneva.: International Trade Centre
- Jones, P., Beynon-Davies, P. and Muir, E. (2003), "Ebusiness barriers to growth within the SME sector", *Journal of Systems and Information Technology*, Vol. 7 No. 1/2, pp. 1-25.
- Kapurubandara, M. and Lawson, R. (2006), "Barriers to Adopting ICT and e-commerce with SMEs in developing countries: an Exploratory study in Sri Lanka", University of Western Sydney, Australia.
- Kartiwi, M. (2006), "Case studies of e-commerce adoption in Indonesian SMEs: The evaluation of strategic use", *Australasian Journal of Information Systems*, Vol. 14 No. 1, pp. 69-80.
- Lawrence, J.E. and Tar, U.A. (2010), "Barriers to e-commerce in developing countries", *Information, Society and Justice Journal*, Vol. 3 No. 1, pp. 23-35.
- Leopoulos, V.N., Kirytopoulos, K.A. and Malandrakis, C. (2006), "Risk management for SMEs: Tools to use and how. Production Planning and Control", Vol. 17 No. 3, pp. 322-332.
- Mahembe, E. (2011), "Literature Review on Small and Medium Enterprises' Access to Credit and Support In South Africa", Underhill Corporate Solutions. National Credit Regulator (NCR): Pretoria, South Africa.
- Mamman, A., Kanu, A.M., Alharbi, A. and Baydoun, N. (2015), *Small and Medium-sized Enterprises (SMEs) and Poverty Reduction in Africa: Strategic Management Perspective*, Cambridge Scholars Publishing.
- Mbatha, B. (2013), "Exploring the potential of electronic commerce tools in South African SME tourism service providers", *Information Development*, Vol. 29 No. 1, pp. 10-23.
- Mensah, A.O., Bahta, A. and Mhlanga, S. (2005), "E-commerce challenges in Africa: issues, constraints, opportunities", World Summit on the information society, briefing paper - economic commission for Africa, Tunis.
- Nyirenda-Jere, T. and Biru, T. (2015), "Internet development and Internet governance in Africa", ISOC Report.
- Okonji, E. (2016), "Africa mobile subscription to hit 725million by 2020", available at: <http://www.thisdaylive.com/index.php/2016/07/28/africa-mobile-subscription-to-hit-725million-by-2020/>

- Paul Jones, P.G.P., Martin Beckinsale, Afshar Jahanshahi, A., X. Zhang, S. and Brem, A. (2013), "E-commerce for SMEs: empirical insights from three countries", *Journal of Small Business and Enterprise Development*, Vol. 20 No. 4, pp. 849-865.
- Pease, W. and Rowe, M. (2003), "Issues faced by small and medium enterprises (SMEs) and their take-up of ecommerce in Australian regional communities", paper presented at the Proceedings of the 4th International We-B Conference (We-B 2003): e-Business and Information Systems.
- Peet, S., Brindley, C. and Ritchie, B. (2002), "The European commission and SME support mechanisms for e-business", *European Business Review*, Vol. 14 No. 5, pp. 335-341.
- Rahayu, R. and Day, J. (2015), "Determinant factors of e-commerce adoption by smes in developing country: evidence from Indonesia", *Procedia-Social and Behavioral Sciences*, Vol. 195, pp. 142-150.
- Saif-Ur-Rehman, R.A. (2016), "A Study of Barriers to E-Commerce Adoption among SMEs in Malaysia", *University of Modern Sciences*, Vol. 1 No. 1, pp. 45-58.
- Santos, J.F.d.S.d. (2015), "Why SMEs are key to growth in Africa", available at: <https://www.weforum.org/agenda/2015/08/why-smes-are-key-to-growth-in-africa/>
- Savrul, M., Incekara, A. and Sener, S. (2014), "The potential of e-commerce for smes in a globalizing business environment", *Procedia-Social and Behavioral Sciences*, Vol. 150, pp. 35-45.
- Shemi, A.P. (2012), "Factors affecting e-commerce adoption in small and medium enterprises: An interpretive study of Botswana", PhD Thesis, Salford Business School, UK.
- Shynet Chivasa, C.H. (2016), "Small and medium enterprises' (smes) adoption and usage of e-commerce: a probit modelling", *International Journal of Economics*, Vol. IV No. 3, pp. 218-226.
- Taylor, M. and Murphy, A. (2004), "SMEs and the take-up of e-business", *Urban Geography*, Vol. 25 No. 4, pp. 315-331.
- UNCTAD, U.N.C.o.T.a.D. (2015), *Unlocking the Potential of E-commerce for Developing Countries*. Switzerland: United Nations Publication.
- Wang, H. and Hou, J.C. (2011), "Drivers and inhibitors of e-commerce adoption in small and medium sized enterprises", *Advanced Materials Research*, Vol. 225, pp. 929-932.
- Wilson, H., Daniel, E. and Davies, I. A. (2008), "The diffusion of e-commerce in UK SMEs", *Journal of Marketing Management*, Vol. 24 No. 5-6, pp. 489-516.
- Zaied, A.N.H. (2012), "Barriers to e-commerce adoption in Egyptian SMEs", *International Journal of Information Engineering and Electronic Business*, Vol. 4 No. 3, pp. 9.
- Zheng, Q. and Wang, T.T. (2012), "Difficulties of e-commerce application in small and medium enterprises", *Advanced Materials Research*, Vol. 472, pp. 3236-3239.