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Chapter

Adoption of Web 2.0 Social Media eCommerce in SMEs: Conceptualising Theories and Factors for Zambia

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Abstract

The application of Web 2.0 social media in eCommerce and e-marketplaces (ECEMs) in developing countries has been on the increase in recent times especially during Covid19 and beyond. However, it is still unclear what theoretical foundations and factors guide ECEM in small and medium enterprises (SMEs) in emerging markets such as Zambia. Generally, the understanding of eCommerce using Web 2.0 social media applications (WSMAs) in SMEs has lacked rigour over time as focus has shifted to pressing issues such as Covid19. This paper purposes to investigate the theoretical foundations and factors influencing WSMA for new eCommerce era in developing countries with particular emphasis on SMEs in Zambia. The methodological research design employs a qualitative study approach using literature reviews, coupled with content analysis of purposively selected articles. Results show that theories such as TAM, TPB, UTAUT2, TOE, TTF, DIT, among others, have guided eCommerce research in SWMA. Behavioural, technological and organisational factors such as trust, ease of use, after-sales logistics, price flexibility have been prevalent, among others. The paper ends with recommendations and strategies for continued adoption of WSMA by SMEs with similar geographical contexts to Zambian context.

Keywords: web 2.0 eCommerce, SMEs, developing countries, theories, factors

1. Introduction

1.1 Background and context of study

Since the onset of Covid19 and its aftermath, many organisations and individuals alike have resorted to more indoor engagements, and as such, the application of social media technologies and eCommerce has been on the increase in business and government activities worldwide. Researchers assert that social media applications will have an increased role in the integration of eCommerce in organisations worldwide [1–3]. The features of the web, now commonly known as Web 2.0, include advanced Internet technology and applications, blogs, wikis, podcasting, RSS and social

networks [4] making it a compelling position for SMEs in developing countries and in the Southern African context. Small and medium enterprises (SMEs) globally are of particular interest due to the significant contribution they make to the economies of their countries.

The development of eCommerce in the SME fraternity, globally, is of particular interest to most economies in the world. For SMEs in developing countries, reaching external markets has been a serious challenge adding on to the already existing lack of ICT infrastructure and lack of ICT skills [5]. In this study, therefore, the rationale is to leverage the power of Web 2.0 social media applications (WSMAs). Particularly, [5] noted that WSMA can leverage consumer eCommerce experiences of SMEs in developing countries and other regions of the world that exhibit similar geographical characteristics.

Extant literature has discussed how the proliferation of social media can aid in spreading ideas, forming impressions and changing the purchasing intentions of the intended audience [6]. The definition of eCommerce is deemed as the sale and purchase of goods and services through the internet in exchange for money and data transfer to complete the transactions [6]. eCommerce is at the forefront of transforming marketing strategies, based on new technologies, and facilitates product information and improved decision-making [6]. Furthermore, eCommerce can be succinctly defined as 'buying, selling and marketing on the Internet' according to [6]. The context of this study extends the normal eCommerce into an advanced form that incorporates social media and Web 2.0 technology. This is usually referred to as social commerce or s-commerce [6, 7]. This study adopts a more accommodative definition of eCommerce that incorporates the use of social media when the SMEs engage with social media technologies in static as well as in mobile locations to facilitate their mobility, commonly known as mobile commerce [7].

Developing countries especially in Sub-Sahara Africa have in the recent years experienced technological growth and a rise in the use of eCommerce platforms, especially during the Covid19 pandemic. Social media platforms have been used to engage in various kinds of communication with the ease of providing more information and variations [8]. Common social media applications that are of interest in this study include Facebook, Whatsapp, Twitter, Youtube, LinkedIn, Instagram and Pinterest [7, 8]. It is argued that SMEs in developing countries could leverage their business position to improve eCommerce opportunities by employing social media applications. According to Kapoor *et al.*, [8], social media provides various interactions that can result in a rich social structure for the benefit of all its stakeholders. The versatility to engage in advanced Web 2.0 eCommerce may favour large companies as compared with small enterprises as noted by Rahayu and Day [9].

The context of this study is Zambia, a landlocked country located in Southern Africa. Neighbouring countries include Angola, the Democratic Republic of the Congo, Malawi, Mozambique, Namibia, Tanzania and Zimbabwe. The geography of the country is mostly high plateau with some mountains. The government system is a republic; the chief of state and head of government is the president. Zambia has a mixed economy in which there is a variety of private freedom, combined with centralised economic planning and government regulation. Zambia is a member of the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC) (<https://globaledge.msu.edu/countries/zambia>). Like many other developing and emerging economies, the Zambian government policies are becoming more and more favourable for SMEs who are the largest provider of employment and contributor to the nation's Global Development Product

(GDP). There has been specific emphasis by the new government on SMEs' activities after a new political party took office in August 2021. There is a new ministry in charge of SMEs which implies that there is more hope to improve business activities of the SME sector.

SMEs generally walk a lonely terrain as there are several challenges that inhibit the growth of eCommerce. Generally, a perennial lack of finance has been experienced by many Zambian SMEs in rural and urban areas. For the majority of SMEs in Zambia, WSMA eCommerce is still in its infancy although there are few cases of progressive development in selected locations across the country. Some challenges inhibiting progress are similar to those described in previous studies and cited by Haji [10], such as the following: 1) limited physical infrastructure; 2) poor access to goods and services; 3) limited economic opportunities; 4) lack of human capital; 5) low population densities in the most remote and rural areas; 6) lack of financial inclusion and challenges for e-payment; and 7) lack of trust and e-commerce consumer protection. [11] have noted that social media can assist to alleviate peculiar challenges and close the gap between user interactions and channel preferences on a global perspective.

1.2 Problem statement and research questions

Social media is arguably one of the best online marketing strategies due to its vast audience [8, 11] and possibly benefiting in popularity due to the Covid19 pandemic. According to Curzi et al., [12], the affirmation of social media platforms has radically changed customers purchasing habits and the way businesses develop their e-commerce sites. Indeed, e-vendors no longer invest money exclusively on advertisements on their eCommerce platforms; rather there is a fierce online competition among companies promoting their goods and services on social media channels [12]. In addition, it is believed that social media facilitates social interaction among customers, leading to increased *trust* and *intention to buy* [12]. Notably, researchers [12] have shown how social media influences the e-commerce decision making. However, the theoretical underpinning of Web 2.0 eCommerce applications in SMEs in developing countries and in Zambia is little understood and still unclear. Furthermore, it is not known whether theories and models have a strong position to enhance our understanding of Web 2.0 eCommerce adoption in SMEs, to follow in the argument of Idris [13]. Furthermore, there has been scattered information in the research literature regarding the advances of Web 2.0 eCommerce in SMEs especially pertaining to behavioural, technological, organisational issues affecting (WSMA) development in developing country SMEs. Given this background, the research questions (RQs) being posed therefore are the following:

RQ1: What theories and models of eCommerce adoption research enhance the understanding of Web 2.0 eCommerce in Zambian SMEs?

RQ2: What factors affect Web 2.0 eCommerce adoption in a developing country context such as SMEs?

In view of the above research questions, the objectives of this study are as follows:

- i. To determine the theories and models that have guided Web 2.0 eCommerce adoption research in SMEs.
- ii. To determine the factors that affect Web 2.0 eCommerce adoption in developing country SMEs.

In seeking to answer the above research questions, this study will follow the qualitative inquiry in WSMA as a way of extending and contributing to Information Systems research in a developing country context. Hence, the research questions intend to stimulate understanding that goes beyond the current literature but answers to the meaning of what social relationships are formed in the wake of Web 2.0 eCommerce adoption.

The rest of this paper is organised as follows. Section 2 presents a review of literature on the theoretical underpinnings in Web 2.0 eCommerce adoption in the global and developing country SMEs. Furthermore, specific applications of these theories and models are also discussed in this Section. Section 2 also provides a review of the factors that affect Web 2.0 eCommerce adoption in view of social media development. The research methodology is discussed in Section 3, whereas the results and findings are discussed in Section 4. The discussion of findings is presented in Section 5. The conclusion and recommendations of the study are presented in Section 6 to close this paper.

2. Review of related literature

2.1 Theoretical foundations of WSMA

2.1.1 The technology acceptance model

A key theory widely used in information technology adoption literature is the Technology Acceptance Model (TAM). TAM was developed by Davis [14] to explain the user adoption of technology in organisations. TAM posits that two factors, perceived usefulness and perceived ease of use, are the two main determinants of system usage in organisations [15]. Furthermore, it is asserted that the systems designer has some degree of control on these two factors. In TAM, *Perceived Usefulness (PU)* is defined as the degree to which an individual believes that using a particular system would enhance his or her job performance, whereas *Perceived Ease of Use (PEOU)* is the degree to which an individual believes that using a particular system would be free of physical and mental effort [15]. In the application of TAM in WSMA in eCommerce environments, Mou and Benyoucef [16] applied TAM in a meta-analytic study that investigated consumer behaviour in social commerce which is an aspect of eCommerce. The authors [16] compared different theoretical frameworks and found the variables from TAM, in combination with other models to be useful in determining eCommerce adoption. Therefore, TAM can be applied in developing country contexts in SMEs environment to provide insights to managers in the decision-making process.

2.1.2 The theory of planned behaviour

The Theory of Planned Behaviour (TPB) was proposed by Ajzen [17] from the social psychology background. TPB posits that there are three constructs that predict intention to use an innovation [17]. These are attitude, subjective norm and perceived behavioural control. Attitude is formed from cognitive beliefs and refers to 'an individual's positive or negative feeling (evaluative affect) about performing the target behaviour' [18]. Subjective norm represents the social influences on behaviour and refers to the perception about whether others who are important to a person believe that he or she should engage in a particular behaviour [18]. Perceived behavioural

control represents the constraints on behaviour and refers to the 'perceived ease or difficulty of performing a behaviour' [18]. In application, Ghani et al. [19] studied cloud-based eCommerce services in Malaysian business owner-managers with the aim of understanding how their own behaviour could influence the usage intention. [19] investigated the influences of the Theory of Planned Behaviour (TPB) and Task-Technology Fit (TTF) towards textile cyberpreneur's intention to adopt cloud-based mobile retail application. It is reported that TTF and TPB constructs, attitude, subjective norm and perceived behavioural control have significant positive effects on textile cyberpreneur's behavioural intentions [19] of SMEs. Hence, TPB can be applied in developing country SMEs where Business-to-Business (B2B) eCommerce decisions-making processes are critical.

2.1.3 The unified theory of acceptance and use of technology

Technology acceptance theories have been applied in a variety of areas to understand and predict user's behaviour and acceptance a particular technology. The Unified Theory of Acceptance and Use of Technology (UTAUT) model was developed by Venkatesh et al., [20] as an amalgam of seven models used to study technology acceptance in different fields. According to [20], the theory integrates models such as the theory of reasoned action (TRA), technology acceptance model (TAM), motivational model, theory of planned behaviour (TPB), model of personal computer utilisation, diffusion innovation theory (DIT) and the Social Cognitive Theory (SCT). The UTAUT model uses four main constructs to predict behavioural intentions and use behaviour of technology in an organisation [20]. The main constructs of the model include Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI) and Facilitating Conditions (FC). UTAUT was further improved to UTAUT2 by including other conditions or constructs. UTAUT2 postulates that the use of technology by individuals is underpinned by the effect of the three additional constructs, which are, hedonic motive, cost/perceived value, and habit, moderated by age, gender and experience [20].

The application of UTAUT2 was undertaken by Arpaci et al., [21], who studied the social sustainability of the Metaverse by integrating the UTAUT2 constructs and five personality traits to understand the social sustainability of the Metaverse. The model was tested by employing a hybrid covariance-based structural equation modelling (CB-SEM) and artificial neural network (ANN) approach based on collecting data from 446 Metaverse users. The CB-SEM results showed that performance expectancy, social influence, hedonic motivation, price value, habit, agreeableness, neuroticism and openness significantly impact the social sustainability of the Metaverse, while no significant effect is reported regarding effort expectancy, facilitating conditions, conscientiousness and extraversion. Drawing on these findings, the study offers several theoretical contributions and sheds light on several practical implications for developers, designers and decision-makers promoting the use of the Metaverse [21]. In another context, Shoeib et al., [22] applied UTAUT2 by extended the UTAUT2 with perceived value, trust and a restructured social commerce construct. The study [22] utilised 463 surveys distributed in Qatar and analysed the data using Structural Equation Model. It is reported by [22] that the results fully supported the proposed model, where *trust, perceived value, facilitating conditions and hedonic motivation* significantly predicted behavioural intentions with an R² value equal to 72%. The UTAUT2 model supported the role of performance expectancy and social commerce constructs in predicting perceived value and the role of effort expectancy and habit in predicting hedonic motivation [22].

2.1.4 The technology, organisation and environment framework

The Technology, Organisation and Environment (TOE) framework suggested by Tornatzky and Fleischer [23] states that the process of technological innovations in organisations is influenced by three dimensions, namely: the organisation context, the technological context and the external task environment (industry). They thus argue that for any organisation to adopt and implement technological innovations, the decision-making process involves consideration of these three areas. The application of TOE in the SMEs environment has been applied in several studies in SME community. The TOE framework was applied by Qalati and Anwar [24] in Pakistan among SMEs in the utilisation of social media.

2.1.5 The task-technology fit theory

The Task-Technology Fit (TTF) theory was developed by Goodhue and Thompson [25] to explain aspects of information systems and the persons who use it. These are the utilisation of technology, the technology itself and the individual using the technology [25]. In the application of TTF that relates closer to the WSMA and the eCommerce SME environment, Aljukhadar et al. [26] applied it to examine the drivers and consequences of *successful task completion* by a user in an online context. The theory suggests that the fit between characteristics of the task and those of the website predicts user performance and behavioural intentions [26]. The hypotheses developed were tested using the input of two large-scale studies performed in 12 industries and involving 13,135 participants [26]. Their results, which were replicated in a proximate culture, provided support to the predictions of Task-Technology Fit theory. It is further reported that the site information quality and ease of use were the only technology factors that significantly drove the users to a successful completion of their information tasks, rather than the site's graphical attractiveness, interactivity, security and privacy factors [26]. The findings further suggested that focusing on the enhancement of site characteristics that have low fit with the task is not effective as it resulted in slowing the successful completion of the online task [26].

Meanwhile, some theories in extant studies have been combined to improve their strength and to test their robustness especially in dynamic environments. Ghani et al., [19] combined TTF theory with the Theory of Planned Behaviour and found it to contribute to the most influential factor towards WSMA eCommerce adoption intentions. This implies that SMEs in developing countries such as Zambia can apply TTF and combine it where applicable in B2B eCommerce decision-making intentions for competitive advantage.

2.1.6 Diffusion of innovation theory

The Diffusion of Innovation Theory (DIT), proposed by Rogers [27], is one of the key theories of adoption and diffusion in the field of information systems. DIT states the following:

- i. Diffusion is 'the process by which an innovation is communicated through various channels over time among the members of the social system [27]'
- ii. Adoption is 'a decision to make full use of an innovation as the best course of action [27]'

- iii. Innovation is 'an idea, practice or object that is perceived as new by an individual or other unit of adoption [27]'

According to DIT, an innovation will be communicated over time through channels of communication within a particular social system [27]. Individuals are seen as possessing different degrees of willingness to adopt innovations, and thus, it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time along an S-shaped curve [27].

Parker and Castleman [28] argue that DIT when applied with all its constructs has better explanatory power because it includes a component of social dimension of SMEs rather than a collection of mitigating barriers and drivers.

2.1.7 The perceived eReadiness model

The Perceived e-Readiness Model (PERM) was developed by Molla & Licker [29, 30] specifically for developing countries context. The model considers some internal organisational factors, known as perceived organisational e-Readiness (POER), and external factors, identified as perceived external e-Readiness (PEER), as important for e-commerce adoption. The authors define POER to comprise the following:

1. The organisation's perception, comprehension and projection of e-commerce and its potential benefits and risks (innovation imperative attributes),
2. The commitment of its managers (managerial imperative attribute); and
3. key organisational components, such as its resources, processes and business infrastructure (organisational imperative attributes).

PEER represents an organisation's assessment and evaluation of relevant external environmental factors (environmental imperative attributes) such as Government e-Readiness, Market Forces e-Readiness and Support Industries e-Readiness [29, 30]. The authors further claim that PERM can assist organisations in developing countries to locate, measure and manage risks in e-commerce adoption activities. Despite the goodwill for PERM, there is little evidence to support the application for this model in Web 2.0 eCommerce SMEs context of developing countries. According to [28], PERM does not recognise the influence of individual factors in e-commerce adoption although it emphasises organisational characteristics as being critical to the advancement of e-commerce in the organisation. It is noted that PERM is unable to capture small firm characteristics [28] which may be critical for social commerce consideration.

2.1.8 The EBusiness satisfaction model

The eCommerce business satisfaction model (EBS) [31, 32] was proposed to evaluate e-commerce success among SMEs from a business perspective. It is proposed that an EBS management model with 15 CSFs as a foundation was developed to assist SMEs' business managers in effectively adopting e-commerce systems or evaluating e-commerce success, which was categorised into five components including Marketing, Management Support and Customer Acceptance, Website Effectiveness and Cost, Managing Change and Knowledge and Skills [31, 32]. The EBS model

has well-defined organisational and eCommerce system structures as indicated in the critical success factor (CSF) [31, 32]. It's been reported to behave very well in Australia and China [31, 32], and it is yet to be tested in other regions, for example, Southern African countries such as Zambia. A drawback on the model is that it is unable to address certain characteristics of startup SMEs that do not have well-defined structures. Furthermore, the social media characteristics may not be fully embraced in the EBS model.

With respect to Trust, the EBS model [31, 32] defines it as 'trust in the interface design and information displayed on a website' which might be well suited for firms that are steps ahead in the eCommerce process. Hence, it might not capture the full spectrum of issues impacting SMEs in a developing country context, even as social commerce may just be in the foundation phase. To strengthen the application of EBS model in SMEs of developing countries, it might be useful to consider the whole spectrum of the social media application in use, in addition to the website design features.

2.2 Factors affecting SME web 2.0 eCommerce adoption

Extant literature has reported that SMEs generally have had serious challenges to implement Web 2.0 B2B eCommerce integration. Several factors have been discussed to inhibit or motivate Web 2.0 B2B eCommerce integration, and these are discussed following TOE framework structure.

2.2.1 Individual factors

Individual traits in a business manager or owner manager have been found to motivate SMEs in eCommerce adoption [29–34]. According to [34], Owner/manager factors relate to executive decisions that the SME owner/manager must make, what financial commitments to take relating to the overall direction of the firm, acquisition of new e-commerce infrastructure, whether the SME must consider e-commerce adoption or not, their appreciation or non-appreciation of ICT and new technological developments and the like. With the innovation of WSMA, an owner/manager should be a key champion to steer their firm in all decision-making processes. Furthermore, the ability of a manager to spearhead WSMA should be that which places great value on social factors [35] and innovativeness.

2.2.2 Behavioural factors

A key factor for motivating B2B SMEs in Web 2.0 eCommerce is 'Trust'. Al-Adwan and Kokash [36] investigated the relationship between trust in social commerce and customers' purchase intentions by providing a mechanism to describe this relationship. Thus, a proposed model was developed based on three concepts: social presence, social commerce information seeking and familiarity with the platform [36]. A survey was designed and distributed to Facebook users. The findings demonstrated that 'trust' in a social networking site has positive influence on purchase intentions [36]. The researchers argue that trust encourages information seeking, which in turn improves purchase intentions [36], corroborating findings by Urena et al. [37]. Furthermore, both *social presence* and *familiarity* were found to enhance *trust* and *purchase intentions*. Furthermore, Urena et al., [37] studied *trust* and *reputation mechanisms* to provide a thorough understanding of new research challenges in WSMA in eCommerce communities. Similarly, a study by

Syuhada and Gambetta [38] in Indonesia found that *trust* is a significant component in the progression of eCommerce among SMEs.

In another context, Kanani and Glavee-Geo [39] took a focus on the problem of uncertainty in social commerce by investigating the influence of the number of positive review comments, seller popularity, customer service quality and return policy on seller uncertainty. Using a self-administered structured questionnaire for collecting data, the results of their analysis showed that the number of positive review comments, seller popularity and customer service quality had a negative influence on seller uncertainty [39]. Their study also concluded that a seller can offer a lenient return policy in addition to good customer service quality experiences lower levels of seller uncertainty than the seller that only offers good customer service [39].

In Thai context, Amornkitvikai et al., [40] noted that SMEs are still facing serious challenges in eCommerce development as compared with large enterprises. [30] examined the factors and barriers affecting the eCommerce sustainability of Thai retail and food and beverage (F&B) service SMEs in metropolitan Bangkok by applying the TOE framework. The findings by Amornkitvikai et al., [40] are that internal eCommerce tools (i.e. smartphones and websites) and external eCommerce platforms (i.e. social media, e-marketplaces and food delivery platforms) can enhance eCommerce sustainability. However, [40] found that the age of firms and owners (CEOs) affects eCommerce sustainability negatively. Additionally, [40] noted that Exports for B2B eCommerce and eCommerce experience can promote the eCommerce sustainability of Thai SMEs. However, they perceive that many consumers are still not literate in using eCommerce. According to [40], Thailand still has insufficient security to prevent hacking and malware, and SMEs' eCommerce literacy is insufficient to enhance their eCommerce sustainability. On the other hand, sustainable eCommerce can increase customer satisfaction, loyalty and trust through customer support, leading to more long-term online shopping [40].

2.2.3 Technological factors

The topic of Artificial Intelligence [AI] has become more prevalent in research studies. Keegan et al., [41] investigated the lack of empirical research on the adoption of AI in B2B marketing among business managers and engineers and academic experts in the field of AI. The researchers argued that AI adoption priorities and motives shape the power dynamics among the various network actors, including focal firms, AI suppliers and technology giant companies [41]. Their findings are that, in the context of AI adoption in B2B, both *technology and expertise* are key sources of power and that data create and perpetuate power negotiations and renegotiations in the network. Furthermore, [41] contributes to the power dependence theory (PDT) by showing that, through the adoption process, network actors' power is exchanged, exercised, counter-balanced and perpetuated, creating fluid network dynamics [41]. SMEs can leverage on the PDT [41] to extend their WSMA reach and strengthen their position in their specific eCommerce networks and industries.

By serving as a platform for open social interactions, popular social media technologies such as Facebook, Twitter, Instagram, Youtube, weChat, among others, have had an impact on the decision-making processes of organisations [41]. Social media can help close the gap between user interactions and channel preferences [41] that could provide more leverage for small firms that are struggling to improve their sales after a slump imposed by the Covid19 pandemic period. Notably, some factors that originated from social media may have triggered consumers' purchasing motivation

and developed a new consumption pattern online [42]. Furthermore, Appel et al., [43] assert that companies must be able to effectively understand and manage consumers via social media platforms. According to [3, 43], Twitter, which is one of the richest data resources on social media networks, can provide an avenue for analysing social media networks. Hence, this insight may be applied to SMEs in developing country contexts, including Zambia, who need to understand their consumers' purchase intentions.

In Poland, Chawla and Chodak [44] noted the increasing importance of social media in ecommerce development in small firms. The researchers designed and conducted an experiment on Facebook (FB) using a web-link in a real business environment, through the FB fanpage of a Polish eCommerce store [44]. The results show that a web-link placed in the comments of an FB post, instead of the caption, is more lucrative [44]. Furthermore, the researchers also showed that, based on the aims of the campaign, such metrics can give valuable information about the optimal time for posting and the interval between posts [44]. This aspect can be followed by SMEs in developing countries using any social media platform of their choice.

Another characteristic of eCommerce in recent years opens up aspects that deal with the mobility of the users as they engage in business transaction. According to [45], this concerns mobile commerce. Hence, [45] argue that SMEs in developing countries may leverage the power of mobile commerce (m-commerce) in the design and engagement with the electronic markets. The research established that consumers are inclined towards m-commerce services that would provide website coupons, provide ease and secure access to information and impact connectivity in a more efficient way. Based on these needs, [45] noted that the capabilities of mobile commerce (m-commerce) could be leveraged through the integration of such technologies as Internet of Things (IoT), Artificial Intelligence (AI) and Machine Learning (ML), among others. However, most SMEs in Zambia lack technical knowledge of these technologies and applications. Furthermore, SMEs in general have limited time to experiment and try out new technologies in the digital space before implementing a strategy on a full scale.

In a study of SMEs in Hungary in a particular wine industry, [46] investigated how family businesses utilise social media tools, to determine what the purposes, benefits and challenges are and to discover competencies that are important in social networking and cooperation. The methodological design of their study used a case study with a qualitative content analysis. Their results showed that Facebook is the most popular social media tool that wineries use to increase brand awareness and reach new potential customers [46]. The researchers also provide a 'Social media roadmap' framework that could be applied by SMEs in other regions of the world, even developing countries. They summarise the application of social media in SMEs to comprise the following:

1. Strategy: clarifying and formulating the goals that align to business objectives, taking into account the following questions: a) Who will be responsible for conducting social media activity? b) What are the policies and regulations (like GDPR) to be followed? c) What percentage of marketing costs can be spent? d) What would be better, compiling an independent social media strategy or integrating the goals into the marketing strategy?
2. Social media: compiling a portfolio of social media tools (based on the target group, type of product or services, HR needs, etc.).

3. Content: creating creative, engaging content tailored to the target audience choosing texts, images or video, determining the frequency of distribution, the regularity and authorisation system.
4. Post: placing posts on social media devices in the form of text, image or video display (Blogger, Facebook, Instagram, YouTube, etc.) and defining short, easy-to-read text and eye-catching images to arouse interest.
5. Feedback: creating a real-time customer response after receiving a request/question, as quickly as possible, and using Facebook Messenger chatbot, which is a software running on messaging platforms that can simulate and imitate human conversation.
6. Connect: placing regular customer inquiries, advertisements and using influencer marketing.
7. Diversity: using at least three different social media tools at the same time to increase the effectiveness of marketing activities.
8. Measure: measuring the effectiveness of social media tools through several factors.

In other contexts, the electronic Word of Mouth (eWOM) is an approach being promoted for business discussions. Verma and Yadav [47] argue that there is a transition taking place in business scenario where the social media is the rock-bed for collaborations and sharing of information. They describe electronic word of mouth (eWOM) for consumer insight through text analytics, sentiment, hashtag analytics and other machine learning tools.

Lorenzo-Romero [48] undertook a study to analyse the omnichannel digital marketing strategies implemented by Spanish fashion and accessories companies with the aim of providing pleasant shopping experiences to their online consumers. The researchers undertook a qualitative analysis specifically consisting of in-depth interviews conducted with marketing managers who implement digital strategies in their businesses to improve the online experience of consumers in an omnichannel context. From a practical perspective, Lorenzo-Romero [48] argues that the Omnichannel concept can help inform companies' decision-making on how to best develop their consumers' omnichannel experience and, in consequence, improve consumers' behavioural responses such as personal participation, satisfaction and engagement with the firm. This approach is recommended for SMEs in developing countries such as Zambia.

2.2.4 Organisational factors

Extant studies have developed conceptual models and frameworks to understand factors that affect SMEs' eCommerce adoption using WSMA. Braojos-Gomez et al., [49] proposed a conceptual model in which *social competitor pressure, IT infrastructure capability, two organisational capabilities (marketing management and innovation management) and firm size enable small firms to learn to develop a social media competence*. The researchers then tested their model using the partial least squares-based structural equation modelling technique employing a unique secondary data set on a sample composed of the 100 small US firms included in the 2013 Forbes America's Best Small Companies ranking [49]. Their empirical analysis suggests that *IT*

infrastructure capability, social competitor pressure, marketing management and innovation management are key mechanisms through which small firms learn to develop a social media competence. It is suggested that social media competence is more important for the smallest manufacturing firms even among a sample of small firms [49] which can give more impetus for SMEs in Zambia. The findings of [49] corroborate with the context of Southern African eCommerce SMEs such as Zambia.

According to Huria [2, 50], the development of eCommerce in recent years entails the need for organisations to plan on facilitations of trade and logistics for import and export. Some key areas worth consideration are (a) an undeveloped legal enabling environment; (b) a low level of readiness among border agencies to tackle e-commerce; (c) the need to improve national quality infrastructure; (d) poor integration of postal services with border agencies; (e) the need to improve air connectivity; (f) the poor reach of logistics and postal delivery in remote areas; and (g) the policy challenges created by exponentially advancing technologies in last mile logistics. It is imperative that SMEs in developing countries such as Zambia consider all aspects of eCommerce fulfilment even as they take up new markets and WSMA.

Entrepreneurship has also been incorporated in the eCommerce research in SMEs [5, 49, 51]. Park et al., [51] argue that social media platforms are an indispensable part of entrepreneurship practices, and as such they offer entrepreneurs a platform for business growth and brand development. Furthermore, [51] investigated factors such as prior knowledge, alertness and social media and found that they affected two aspects of opportunity which are the discovery and the creation of entrepreneurial opportunity.

In Saudi Arabia, Altayyar and Beaumont-Kerridge [52] found external factors affecting eCommerce adoption among SMEs. These are: government support, own postal addresses and delivery service, providing secure and trustworthy online payment options, low cost and high-speed internet connection, ICT-related educational programmes, supplier's willingness and readiness to participate or exert pressure, competitor's pressure, policy and regulations and business and national culture.

In the wake of WSMA in SMEs, Schmuck [53] introduces changes that may impact the business structure and operations due to the integration of social media, such as the application of *online business models*. Researchers [42, 53] and social marketing capabilities such as branding and innovation have been found to positively and significantly affect eCommerce.

2.2.5 Environmental factors

Environmental factors have been found to influence eCommerce adoption in extant studies. Government e-Readiness, market forces e-Readiness, systems and cyber security concerns and Support Industries e-Readiness [29–34]. SMEs in developing countries such as Zambia need assistance to understand and interpret business regulations in the environment at the local and global level. According to Cuellar-Fernandez and colleagues [54], SMEs can experience success in eCommerce entrepreneurship by adopting brick and click and internationalisation strategies.

2.2.6 Social and cultural factors

The role of culture in some instances has significantly played a key role in SME Web 2.0 eCommerce adoption in developing countries. In China, Miao et al. [55] describe the Guanxi culture which has been noted to boost entrepreneurship in

social commerce. In their case study, Miao et al. [55] developed a process model that described how customer entrepreneurs benefit from light entrepreneurship through acquiring knowledge and sharing knowledge within guanxi circles embedded in social media. Their study demonstrated that the roles of the mass entrepreneurship climate and the social commerce affordances in this benefit realisation process [55]. Certain group formations such as Agricultural and business cooperatives, enabled by social media interactions among SMEs in developing countries, are a great way to enhance Web 2.0 eCommerce adoption.

2.2.7 Other factors and natural causes

A conducive environment and Peace are other key factors that would affect Web 2.0 SME eCommerce adoption. Conflicts of nationals might create war which might inhibit WSMA in SMEs from participating in eCommerce. Issues of climate such as floods may inhibit smooth operation for SMEs in Web 2.0 eCommerce adoption.

3. The research methodology

The research approach of this study is qualitative in nature, aiming to respond to the research questions and to draw deeper understanding of the theories, models and factors of WSMA eCommerce adoption. The application of theories is therefore regarded as a lens for understanding eCommerce adoption in the SMEs and not as a way of drawing comparisons among the theories and models. The first and major part is the review of literature using content analysis. Data collection was by means of searching in scholarly journals such as Elsevier.com, emeraldinsight.com and similar types that were published in the recent years, since 2012. Articles that matched the WSMA in eCommerce adoption were selected for analysis, included 58 articles. The latter part of methodology includes analysis of each of the articles, drawing themes and insight into theories and factors of Web 2.0 eCommerce adoption in SMEs. The research draws distinction between eCommerce adoption studies in general and those of recent times that place emphasis on social media technologies. These issues assisted in the collection of the 58 articles that met these criteria.

4. Results and findings

It is observed that Web 2.0 eCommerce adoption has received substantial attention in theoretical reasoning in extant studies. The application of theories has had a varying emphasis with respect to the context of application and the extent of use of technology in WSMA. **Table 1** shows the key theories and models that have been identified in the literature.

The results corroborate findings by Idris [13], who argued that no individual theory or model is able to present a rich view of eCommerce adoption. A combination of theories was able to provide a more definitive and explanatory power to the research questions and therefore was highly recommended by the respective authors, corroborating findings by Dospinescu et al., [56].

With respect to the factors, **Table 2** shows a summary of the factors identified from the literature.

| Theories and Frameworks | Articles | Insights/Lessons for WSMA eCommerce |
|-------------------------|----------|---|
| TAM | [14–16] | Applicable in WSMA |
| TPB | [17–19] | Applicable to Cyberpreneurs, A combination of TPB and TTF is used. |
| UTAUT and UTAUT2 | [20–22] | Trust, perceived value, facilitating conditions, and hedonic motivation |
| TOE | [23, 24] | Applicable in Pakistan, in social media. |
| TTF | [25, 26] | Site information quality and ease of use positively influence adoption |
| DIT | [27, 28] | Social dimension of SMEs are applicable, also applied in various kinds of technological innovation. |
| PERM | [29, 30] | Tested in developing country context and verified in China. |
| EBS | [31, 32] | 15 Verified critical success factors. Tested in Australia and China, and more studies are proposed. |

Table 1.
Key theories and models.

| Factors affecting SME Web 2.0 eCommerce Adoption | Articles | Insights/Lessons |
|--|---------------------|---|
| Individual | [29, 30, 31–35, 57] | Customer satisfaction, Loyalty, Trust through customer support, Online shopping, Innovativeness, |
| Behavioural | [36–40] | Social presence and familiarity, Trust, Purchase intentions, Reputation mechanisms |
| Technological | [41–48] | Knowledge and expertise in appropriate technology such as AI, eWOM, Social media technologies |
| Organisational | [42, 49–58] | Manager preferences and e-readiness, culture, IT and website infrastructure capability, Social competitor pressure, marketing management and innovation management. Entrepreneurship, Internationalisation, Business strategy, Interaction-based model, Trust in the eCommerce system interface |
| Environmental | [29–34] | Government policies, Legal issues, Government e-Readiness, market forces e-Readiness and Support Industries e-Readiness |
| Social and Cultural | [54] | Guanxi, Agricultural and business cooperatives, social media interactions and business networks |
| Natural causes | [34] | Floods, earthquakes and other natural disasters |

Table 2.
Factors affecting SME web 2.0 eCommerce adoption.

[56] found that eCommerce satisfaction factors may impact the SMEs differently in various context, given that technological diffusion occurs at various stages in various regions and countries across the world. Meanwhile, Depaoli et al. [57] argue for a

nonlinear, interaction-based development model for SMEs which may be suitable for unpredictable environments for SMEs in Zambia.

5. Discussion of findings

This study set out to establish the theoretical foundations of Web 2.0 eCommerce applications in SMEs in developing countries. In the review of related literature on the matter, several theories have been discussed in their origin and how they were applied as technology was being adopted and used in the industry and in the SME context. The review briefly discussed the following theories, not listed in any particular importance: 1) Technology Acceptance Model, 2) Theory of Planned Behaviour, 3) UTAUT and UTAUT2, 4) TOE Framework, 5) Task-Technology Fit, 6) Diffusion of Innovation Theory, 7) PERM and 8) EBS model. The application of the discussed theories and models has been aligned to social media environment.

Among the various factors identified in extant studies, Trust was found by [58] to appear early and usually at the inception of eCommerce process in the enterprise. Several other factors are technological and reflect the advancing nature of the technologies at play, with AI, Machine learning, IoT and similar others featuring in the discussions and practice. The lack of management expertise, poor infrastructure, lack of finance, lack of ICT skills in SMEs are perpetual challenges among SMEs in developing countries [29, 30], and their uptake of web 2.0 eCommerce will require that they wean off from the current prevailing hurdles. Social media technologies such as Facebook, Twitter, Instagram, weChat, Youtube and other similar ones have contributed to the eCommerce adoption and integration factors. Despite the challenges, each enterprise manager is expected to find their

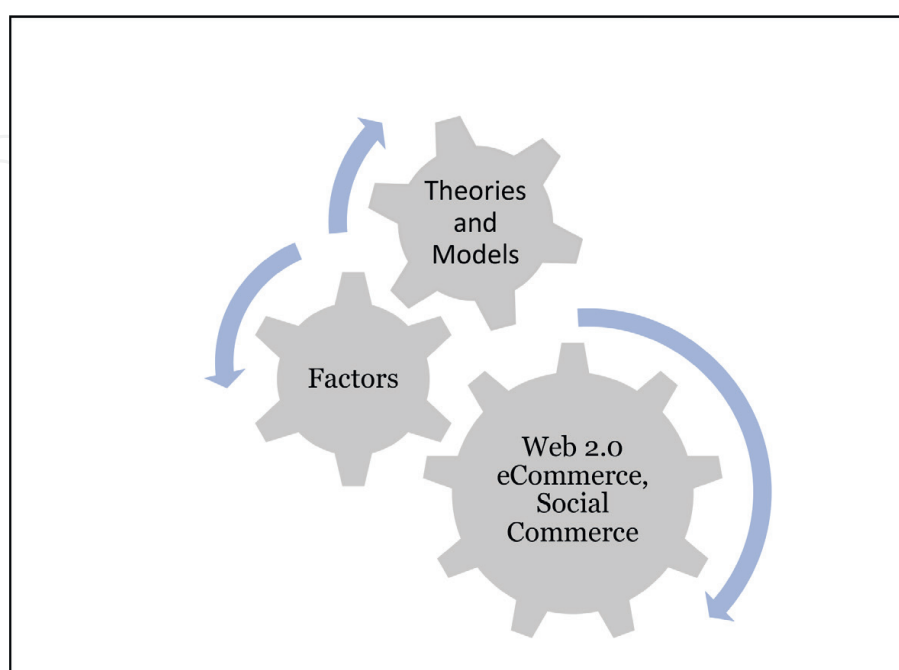


Figure 1.
Interaction of the SME business environment.

place in the industry by continuously taking considerations and making decisions in favour of their enterprise.

Figure 1 shows three aspects that depict an interaction of the business context impacting on SMEs. These are 1. theories and models, 2. Factors, and 3. the Web 2.0 eCommerce technologies for adoption.

6. Conclusions and recommendations

This chapter has discussed the theoretical foundations of Web 2.0 eCommerce applications in SMEs in developing countries. In the review of related literature on the matter, several theories have been discussed in their origin and how they were applied as technology were being adopted and used in the industry and in the SME context. The review discussed theories and models of web 2.0 eCommerce adoption for developing country SMES, namely TAM, TPB, UTAUT and UTAUT2, TTF, DIT, PERM and the EBS model. The chapter has discussed factors that affect Web 2.0 eCommerce adoption as the proliferation of social media advances in SMEs. The factors have been presented as individual, behavioural, technological, organisational, environmental, social and cultural and other natural causes. Details of each of these factors have been discussed to provide insight on how they have been encountered in SMEs.


This study does not present a one-size-fits-all model for SMEs in developing countries. As organisations are unique, so are their contexts and the managers who make decisions for their competitive position in the industry. Hence, it is recommended that SMEs adopt a process of continuous improvement as they resolve various challenges that impact their firms. As shown in **Figure 1**, the continuous gearing in the SME business context requires that managers become proactive in seeking better ways of engaging in Web 2.0 eCommerce adoption. SMEs could draw insight from this book chapter and various scenarios that have been presented and apply the lessons learnt to the specific conditions that prevail in their local context. To strengthen their position in the industry, SMEs in developing countries, and Zambia particularly, are encouraged to team around regional and global eCommerce value chains to enhance capacity and growth.

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