




Exploring SME owners' motivation to learn and acquire new skills for the adoption of e-commerce



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Background: The adoption of e-commerce among Soweto-based small and medium-sized enterprises (SMEs) is crucial for their growth and competitiveness. Traditional approaches in determining factors that motivate the adoption of e-commerce have been mainly quantitative, not taking into consideration the experiences, motivation and perceptions of SME owners' willingness to learn and acquire new skills for the adoption of e-commerce.

Aim: This article examines the factors that motivate Soweto-based SME owners' willingness to learn and acquire new skills to adopt e-commerce, despite the perceived complexity of using technology.

Setting: The study focussed on Soweto-based SMEs in Johannesburg, South Africa.

Methods: A qualitative methodology was deployed by drawing on the theoretical frameworks of the Technology Acceptance Model (TAM) and Motivational Model (MM). Semi-structured interviews were conducted with eight Soweto-based SMEs to examine the factors that motivate Soweto-based SME owners to acquire new skills to adopt e-commerce, notwithstanding the perceived complexities associated with using technology.

Results: The analysis of the data revealed that perceived benefits as well as intrinsic and extrinsic motivation played a pivotal role as key moderators in Soweto-based SME owners' willingness to acquire new skills for the adoption of e-commerce.

Conclusion: The study confirmed the multifaceted factors shaping the willingness of Soweto-based SME owners to adopt e-commerce, emphasising the pivotal role of perceived benefits and motivation, aligning with established models like TAM and the MM, to underscore the significance of intrinsic and extrinsic motivation, diverse characteristics and organisational readiness in influencing their attitudes towards new skills acquisition and e-commerce adoption.

Contribution: By providing nuanced insights into the intricate processes that drive SME owners to embrace new skills and e-commerce technologies in Soweto, the findings add to the body of information already in existence. This report could be used by the government to improve its SMEs' support initiatives.

Keywords: e-commerce; small and medium enterprises; intrinsic and extrinsic motivation; willingness to learn; Technology Acceptance Model; Motivational Model; Soweto; technology adoption.

Introduction

The estimated South African e-commerce market value in 2021 was \$4.5 billion and is estimated to increase to \$7.9 billion in 2027 (Renub Research 2021:1). This has led to a rapid acceleration in its adoption in developing countries such as South Africa (Amornkitvikai et al. 2022:2). Furthermore, it has been reported that in 2020 there were more than 18 million e-commerce users in South Africa with an additional estimated six million users shopping online.

The adoption and spread of e-commerce in Africa is on the rise, with its growth being propelled particularly by the onset of the coronavirus disease 2019 (COVID-19) pandemic in the year 2020 (Costa & Castro 2021:3046; Guthrie, Fosso-Wamba & Arnaud 2021:2; Reardon et al. 2021:1244). The current research has profound implications for small and medium-sized enterprises (SMEs) and particularly SME owners' motivation to acquire new skills required for the adoption of e-commerce to facilitate business continuity. There is a need for research that investigates the motivational factors that lead to SME owners' willingness to learn and acquire new skills for the adoption of e-commerce notwithstanding the perceived complexities associated with using the technology.

There is a growing body of research that examines factors that influence the adoption of e-commerce among SMEs (Amaglo 2020:14; Das 2019:283; Hasan & Mardhani 2021:1; Novanda et al. 2021:27; Sombultawee 2020:257). Other studies have explored barriers that negatively impact the adoption of e-commerce among SMEs (Chau, Deng & Tay 2020:457; Oki, Uleanya & Lucose 2021:1; Sombultawee 2020:256; Zoroja, Klopota & Stjepić 2020:323). In most instances, scholars have relied on the Technology Acceptance Model (TAM) theoretical framework to examine the factors that influence the adoption of e-commerce and barriers that negatively impact the adoption of e-commerce among SMEs (Abed 2020:3; Govinnage & Sachitra 2019; Rafique et al. 2020:3; Schmidhuber, Maresch & Gunner 2020:8; Taylor 2019:671).

Yet, theoretical and empirical understanding of an SME owner's motivation of their willingness to learn and acquire new skills for the adoption of e-commerce is quite limited. Traditional approaches in determining factors that influence the adoption of e-commerce have been mainly quantitative and do not take into consideration the experiences, motivation and perceptions of SME owners in the implementation processes of adopting e-commerce (Adam, Alhassan & Afriyie 2020:839; Amornkitvikai & Lee 2020:15). Moreover, much of the extant knowledge assumes that the perceived complexities of using e-commerce continue to hinder the widespread adoption of e-commerce among SMEs (Seethamraju & Diatha 2019:5182; Shaikh et al. 2021:20).

Other innovation theories and prescriptions are largely focussed on the rate of diffusion of e-commerce and largely based on the assumption that in the context of e-commerce adoption, complexity is believed to have an adverse effect on the rates of adoption by SME owners (Das 2019:283; Sanchez-Torres & Juarez-Acosta 2019:138; Schmidhuber et al. 2020:2). As a result, when it is assumed SME owners perceive e-commerce as overly complex, they are inclined to resist its continuous incorporation into their business processes (Ha 2020:2823).

Furthermore, the literature has long underscored the limitations of TAM and its variations in understanding and explaining acceptance in ways that guide development beyond suggesting that system characteristics impact ease of use (Adjin-Tettey 2018:94; Chau et al. 2020:460; Selase et al. 2019:5; Venkatesh 2000:344). A notable drawback is TAM's oversight of the psychological and social aspects, neglecting the influence of situational and motivational factors on SME owners' adoption of e-commerce (Babić & Golob 2018:1377; Mwathi 2018:11; Venkatesh 2000:344). An individual's ongoing engagement with technology significantly shapes their behaviour (Binesh & Baloglu 2023:1603). Therefore, a more comprehensive understanding of SME owners' experiences, learning journeys and sense of achievement is imperative for a holistic grasp of e-commerce adoption (Das 2019:283; Sanchez-Torres & Juarez-Acosta 2019:137; Shang, Chen & Shen 2005:402).

To expand our understanding of the adoption of e-commerce among SMEs, this study examines the factors that motivate Soweto-based SME owners' willingness to learn and acquire new skills in order to adopt e-commerce, despite the perceived complexity of using the technology. The study uses TAM (perceived ease of use and perceived usefulness) and Motivational Model (MM) theory (intrinsic and extrinsic motivators) to better understand what motivates Soweto-based SME owners' willingness to learn and acquire new skills for the adoption of e-commerce.

The research deployed the theoretical frameworks of TAM because this model focusses on users' acceptance of technology adoption based on their perceptions of its usefulness and ease of use (Matyila 2019:70; Selase, et al. 2019:5). Within this model, two pivotal elements come into play, significantly impacting users' choices regarding technology adoption. Firstly, there is the concept of 'perceived ease of use', which pertains to how effortlessly users perceive the system to be in its operation (Babi & Golob 2018:1377; Jan et al. 2019:203). Secondly, 'perceived usefulness' relates to the extent to which users believe the system enhances their job performance and benefits the business (Abed 2020:3; Schmidhuber et al. 2020:8). These two factors play a central role in influencing whether individuals choose to embrace or decline a particular technology (Alduaij 2019:131).

The study also used MM theory which encompasses the interplay between extrinsic and intrinsic motivations that contribute to shaping the SME owner's willingness to invest time and effort in learning and implementing e-commerce practices (Luo, Chea & Chen 2011:22; Otyola et al. 2023:21). In the MM theory, the nuanced factors that drive SME owners to embrace e-commerce, combine external rewards with internal desires for personal and professional growth (Hennessey et al. 2015:1; Kathin 2023:178). Extrinsic motivation refers to the positive outcomes or rewards of adopting e-commerce, while intrinsic motivation reflects an SME owner's inherent interest in acquiring new knowledge and skills related to e-commerce (Das 2019:283; Kathin 2023:178).

The examination of an individual's motivational traits and attributes is significant because entrepreneurs' personality traits and characteristics could potentially exert influence over their decision to adopt e-commerce (Hennessey et al. 2015:1; Shang et al. 2005:402; Yusoff et al. 2021:1829). Additionally, this study found that the perceived benefits of using e-commerce outweigh the perceived complexities of using e-commerce. Moreover, the research established that a favourable perception of the benefits and usefulness of e-commerce aligns with TAM and MM on how it influences the attitude of SME owners towards its usage. On the other hand, perceived ease of use impacts the behavioural intention of Soweto-based SME owners towards e-commerce usage. The mental effortlessness provided by e-commerce positively affects attitudes and attracts more adoption behaviour by SME owners.

Small and medium-sized enterprise owners with high entrepreneurial orientation, driven by intrinsic and extrinsic motivation aligned with MM, are more inclined to leverage e-commerce for enhanced operational efficiency and marketing capabilities driven by curiosity, and a sense of accomplishment. Successful entrepreneurs derive satisfaction from experimenting with new technologies, enhancing their business operations or staying ahead of industry trends; they are willing to adopt the right technology and invest time in the task at hand. Thus, the intrinsic and extrinsic motivation of the business owner has a significant relationship as a moderator towards the willingness to acquire new knowledge required for the adoption of e-commerce.

Perceived benefits as motivational factors to acquire new e-commerce skills

Globally, the rapid adoption of e-commerce among SMEs is driven by the anticipation of various benefits (Kumar & Ayedee 2021:6; Triandini, Hermawan & Suniantara 2020:112). These benefits encompass enhanced operational efficiency, innovation, stronger customer and supplier connections, cost reduction, broader market access and overall improved business performance, among other factors (Fitriasari 2020:57; Helkkula, Kowalkowski & Tronvoll 2018:284; Iyamu 2020:2; Johnson & Iyamu 2019:1; Lim and Trakulmaykee, 2018:383; Triandini et al. 2020:112; Tseng et al. 2019). Furthermore, SMEs that choose to adopt e-commerce have the opportunity to establish partnerships and external connections, boost market expansion and access to global customers, enhance their operational processes and decrease input expenses (Saridakis et al. 2019:56; Zhelyazkova 2020:263). These actions can enhance their competitiveness, ultimately resulting in a competitive edge (Saridakis et al. 2019:56; Xuhua, Chosniel Elikem & Akaba 2019:81).

Considering the financial limitations and cashflow challenges that SMEs frequently encounter, a notable benefit of employing e-commerce lies in its ability to streamline interactions and payment transactions between consumers and SMEs, as well as among SMEs and suppliers (Alazab, Dick & Far 2020:2351; Olanrewaju et al. 2020:93). E-commerce transactions are perceived as simpler, faster and enhancing consumer satisfaction, all the while effectively tackling the cashflow hurdles encountered by SMEs (Vakulenko et al. 2019:462; Worku & Muchiea 2019:350).

Amid periods of disruption and rapid changes in the business environment, e-commerce assumes a vital function in guaranteeing the uninterrupted provision of goods and services by SMEs to their customers (Kuckertz et al. 2020:2). Additionally, e-commerce serves as a broad platform to search for and remain abreast of up-to-date information, while operating as an inventive learning channel (Kumar & Ayedee 2021:6). This enables SMEs to acquire novel insights and skills through active engagement with information (Alduaij 2019:129).

The TAM theory explains the rapid adoption of e-commerce by SMEs through the perceived ease of use and usefulness of the technology, considering its relative advantage, compatibility, lower complexity, trialability and observability. The MM theory further highlights that SMEs are driven by both intrinsic rewards, such as enhanced customer satisfaction and innovation, and extrinsic rewards, including cost reduction, broader market access and competitive advantage. These factors align with SMEs' goals of expanding market reach and streamlining processes. However, not all entrepreneurs adopt e-commerce simultaneously because of factors such as relative advantage, compatibility, complexity, trialability and observability (Das 2019:284; Pantano & Vannucci 2019:298; Schmidhuber et al. 2020:3).

Iyamu (2020:2) further proposed that e-commerce platforms that provide comprehensive information about a company's offerings can effectively draw in customers, thereby contributing to the success of their online sales. E-commerce serves as a powerful instrument for efficiently promoting and selling products and services thereby fostering enhanced branding (Amornkitvikai et al. 2022:5). Nevertheless, research from both theoretical and practical investigations has indicated that the advantages of e-commerce are not intrinsic and that SME owners must understand how to effectively harness the technology to their benefit (Worku & Muchiea 2019:352).

Perceived barriers to acquisition of new e-commerce skills

Constraining elements hinder the uptake and effective utilisation of e-commerce among SMEs, especially within developing countries (Al Busaidi, Bhuiyan & Zulkifli 2019:37; Al-Tit 2020:147; Hussain, Shahzad & Hassan 2020:4). Nazir and Roomi (2020:2) as well as Bvuma and Marnewick (2020:2) argue that developing countries exhibit significant heterogeneity, with diverse characteristics encompassing political systems, economies, ideologies, demographics, culture and ethnicity. Developing countries are said to have an absence of comprehensive national strategies for information and communication technology (ICT) to facilitate the adoption of e-commerce (Al-Tit 2020:148; Zoroja et al. 2020:323).

Moreover, township SMEs face distinct socio-economic obstacles, including inadequate infrastructure, absence of essential amenities, marginalisation from mainstream economic endeavours, a high rate of illiteracy and shortages in skills (Oluwayemisi 2019:10; Zulu 2018:5).

The barriers include elements such as the high cost of Internet access, price sensitivity, security apprehensions, a lack of technical proficiency, a lack of comprehension of e-commerce by both management and staff, high costs linked to e-commerce tools, a lack of customer readiness, the absence of payment systems and legal restrictions (Al Busaidi et al. 2019:37; Al-Tit 2020:147; Hussain et al. 2020:2; Kumar & Ayedee 2021:1). Barriers also encompass

technical constraints, legal hurdles, heavy reliance on cash and credit-based transactions and a deficiency in robust internet security measures (Seethamraju & Diatha 2019:5179; Zoroja et al. 2020:313). These difficulties are compounded by employees' limited comprehension of information technology, a deficiency in innovation and managerial availability, the tangible assessment of e-commerce benefits and the related costs (Hassen, Abd Rahim & Shah 2019:73; Oki et al. 2021:16).

Furthermore, Al-Tit (2020:148) identifies two factors that negatively impact the adoption of e-commerce: the perceived complexity of technology and the perceived risks linked to e-commerce. These elements play a crucial role in impeding the widespread acceptance of e-commerce among SMEs (Giotopoulos et al. 2017:61; Ha 2020:2823). Primasari and Abriani (2019:89) argue that the obstacle to embracing e-commerce emerges from differences in viewpoints regarding the benefits and user-friendliness of the e-commerce system. Divergences in perceptions about the merits and user-friendliness of e-commerce align with the principles of TAM (Al Harizi & Al Marhoon 2019:87; Selase et al. 2019:5).

The existence of complexity has negative effects on the connection between the perceived ease of use and the intention to use e-commerce in accordance with the TAM theory (Das 2019:283). This could be because of the fact that increased complexity causes SMEs lacking in technological expertise to view themselves as unfairly disadvantaged as compared to peers with greater technological proficiency (Babić & Golob 2018:1377; Jan et al. 2019:204). Small and medium-sized enterprise owners might exhibit a reluctance towards the adoption of e-commerce, particularly because of the relatively time-consuming and high financial investment required for learning new e-commerce skills (Amornkitvikai et al. 2022:5). As a result, many SMEs initiate their path towards the adoption of e-commerce by using social media (Schmidhuber et al. 2020:8).

Alduaij (2019:141) examined the adoption of social media by SMEs to market their products and revealed that the greatest percentage of participants perceive social media as an uncomplicated mode of communication. Nevertheless, SMEs frequently face challenges stemming from insufficient technology literacy to effectively harness the potential of using e-commerce (Burgess et al. 2017:4; Kumar & Ayedee 2021:11). The MM theory can further explain these barriers. The intrinsic and extrinsic rewards anticipated by SMEs might not outweigh the perceived costs and risks associated with adopting e-commerce, leading to hesitation and slower adoption rates. Consequently, these constraints highlight the need for SMEs to either bring in skilled personnel or enhance existing technological capabilities to overcome these barriers and leverage e-commerce for competitive advantage (Sun et al. 2021:14).

Motivational factors to acquire new e-commerce skills

Motivation, the primary determinant factor of adopting e-commerce (Sun & Gao 2020:6), has a role in formulating a person's behaviour and actions (Kathin 2023:178). Motivation encompasses the internal mechanisms that provide both energy and direction to behaviour (Lee, Cheung & Chen 2005:1096). Small and medium-sized enterprise owners' willingness to acquire new knowledge and skills to adopt e-commerce requires motivation (Otyola et al. 2023:22). Motivation can be driven intrinsically (the individual's internal desire or personal drive to engage) and extrinsically (the perception that adopting e-commerce will lead to positive outcomes or rewards) (Bastari et al. 2020:2; Hennessey et al. 2015:2; Luo et al. 2011:28; Sun & Gao 2020:6; Venkatesh 2000:348).

From the perspective of TAM, motivation influences the perceived ease of use and perceived usefulness of e-commerce, with intrinsic motivation making it seem less complex and extrinsic motivation highlighting its benefits for business. The MM theory further explains that the interplay between extrinsic and intrinsic motivations shapes the SME owner's willingness to invest time and effort in learning and implementing e-commerce practices. Previous research has tested attitude as a mediator between motivation, beliefs and intention to use (Binesh & Baloglu 2023:1606, Yusoff et al. 2021:1838).

Entrepreneurial attributes that influence the willingness to learn e-commerce

A prevailing trend observed in SMEs is the entrepreneurial drive towards the adoption of e-commerce, even in cases where the e-commerce does not perfectly align with the SME's current resources (Akbar et al. 2022:3). Kumar and Ayedee (2021:10) elucidate technology readiness as the business owner's predisposition to employ advanced technologies for goal attainment. In the current study, technology readiness for e-commerce adoption is delineated as the combination of information technology (IT) infrastructure and IT proficiency referred to as technological assets (Ha 2020:2822; Setiyani & Rostiani 2021:1116).

Small and medium-sized enterprise owners possess centralised decision-making capabilities (Kumar & Ayedee 2021:10) to endorse the technology (Hussein et al. 2019:414; Yusoff et al. 2021:1830). In response to the distinctly centralised decision-making frameworks of SMEs, Diabate et al. (2019:3) introduced the business owner's characteristics as an extra dimension. In this study, entrepreneurial traits are embedded within the organisational context, akin to the adoption of e-commerce (Amornkitvikai et al. 2022:4; Fadda 2018:24).

Attributes of business owners could influence the adoption of e-commerce (Hamad, Elbeltagi & El-Gohary 2018:213; Pantano & Vannucci 2019:298; Zhai et al. 2018:3). These factors

include the owner's age, gender, education and IT proficiency (Nazir & Roomi 2020:3; Schmidhuber et al. 2020:2). For example, Ezzaouia and Bulchand-Gidumal (2020:3) emphasise the importance of top management support in the adoption and implementation of e-commerce among Moroccan SMEs. Likewise, Amornkitvikai et al. (2022:6) identify statistical disparities in business owner gender, experience and e-commerce education between adopters and non-adopters among Bangkok SMEs. A study conducted by Gu (2022:2) among 400 SMEs located in Pietermaritzburg and Durban, South Africa, unveiled numerous internal factors such as business owner characteristics, organisational attributes and internal IT capabilities that exerted influence over the adoption of e-commerce. Furthermore, the individual socioeconomic background, employment status and educational achievement of the business owner exert an impact on the extent of digitalisation (Cilliers 2018:2; Seethamraju & Diatha 2019:5182).

On the contrary, Mahliza (2019) discovered that the expertise and capabilities of business owners showed no significant association with the adoption of e-commerce within Indonesian SMEs situated in Jakarta. Amornkitvikai et al. (2022:15) observed that IT skills, education and gender displayed no correlation with IT adoption among Thai SMEs. Despite the contradictions stated earlier, Gu (2022:3) argues that a closely related concept associated with the business owner's aptitude in handling information is confidence, which involves evaluating one's capability to skilfully navigate a particular situation. Likewise, Al-Tit (2020:147) and Yusoff et al. (2021:1831) attest that the achievement orientation of business owners, their locus of control, confidence and the types of technology adopted are interrelated factors. In the context of the current research study, the owner's confidence particularly pertains to their appraisal of their own ability to proficiently manage situations involving the utilisation of e-commerce (Gu 2022:3).

When business owners make decisions, their choices are shaped by their competence and psychological mindset (Fadda 2018:24). The confidence of business owners significantly impacts risk management in SMEs and their potential for adopting e-commerce (Hoang, Nguyen & Nguyen 2021:54, Yusoff et al. 2021:1831). Owners with higher levels of confidence contribute to enhancing the innovation capabilities of the enterprise, making them more inclined to embrace e-commerce (Hamad et al. 2018:213), and initial confidence exhibited a positive relationship with eventual accomplishments (Gu 2022:4). Thus, it is reasonable to propose a positive correlation between business owner confidence and e-commerce adoption because information proficiency and confidence of business owners synergistically influence the adoption of e-commerce within SMEs (Nazir & Roomi 2020:3). Therefore, the owner's information aptitude and confidence are interlinked (Gu 2022:4).

The entrepreneurial drive and centralised decision-making capabilities of SME owners emphasise the importance of

perceived ease of use and usefulness in TAM along with intrinsic motivations for innovation and achievement. In addition, extrinsic rewards like market expansion and cost savings align with the MM theory, shaping their willingness to adopt e-commerce and invest in it, further supported by technology readiness, IT proficiency and owner confidence.

Management support as a cultivator for acquiring new skills for e-commerce

Top management encompasses the business owner's viewpoint regarding the endorsement of pertinent technologies and the level of financial backing designated for their execution (Zhai et al. 2018:3). This endorsement holds a crucial role in furnishing the essential resources for the assimilation of e-commerce (Chandra & Kumar 2018:263; Costa & Castro 2021:3045). Top management engagement holds particular importance when contemplating the introduction of ground-breaking concepts, which necessitates the amalgamation of resources and the reconfiguration of the business structure (Ezzaouia & Bulchand-Gidumal 2020:3). Top management backing is essential to cultivate an atmosphere that promotes organisational creativity (Setiyani & Rostiani 2021:1117).

The business owner and top management support teams with challenges and problem-solving initiatives (Adam et al. 2020:847; Diabate et al. 2019:3; Ezzaouia & Bulchand-Gidumal 2020:3). Top management support assists in the introduction of e-commerce (Hussein et al. 2019:413) by providing financial and human resources, offering visionary leadership and creating a conducive environment for innovation (Chandra & Kumar 2018:263; Costa & Castro 2021:3045).

Organisational culture encapsulates a blend of overarching characteristics that include norms, assumptions, beliefs and values (Hamad et al. 2018:213). Setiyani and Rostiani (2021:1117) assert that organisational culture plays a pivotal role in influencing the landscape of e-commerce adoption within SMEs. As a result, top management's endorsement and financial support are crucial for e-commerce adoption, influencing perceived ease of use and usefulness in TAM, while also aligning with MM theory by providing extrinsic motivation through resources and visionary leadership, thereby shaping organisational culture to foster innovation and facilitate technology adoption.

Training and capacity building

The characteristics of the enterprise itself and its internal IT capabilities significantly influence SMEs to adopt e-commerce (Audretsch et al. 2021:2). There is an interplay between SMEs' absorptive capacity (the ability to acquire external knowledge) and the adoption of e-commerce for effective digital transformation (Müller, Buliga & Voigt 2021:333). Gu (2022:2) reveals a positive correlation between absorptive capacity and e-commerce adoption in EU-27 firms. The evaluation of absorptive capacity in SMEs encompasses the adoption and utilisation of e-commerce (Audretsch et al. 2021:2; Duan, Wang & Zhou 2020:2; Gu 2022:4).

Embracing e-commerce extends beyond financial investment to include training and active utilisation, changes in organisational strategy and processes, learning and socio-technical frameworks (Giotopoulos et al. 2017:61; Hoang et al. 2021:52; Seethamraju & Diatha 2019:5176). The enterprise's characteristics and internal IT capabilities play a crucial role in SMEs' adoption of e-commerce, with TAM highlighting how absorptive capacity enhances perceived ease of use and usefulness for digital transformation, and the MM theory emphasising how it motivates adoption through training, strategic changes and socio-technical frameworks to align organisational goals with technological integration and innovation.

Research design and methodology

The data presented in this article form part of a larger study that used a mixed-methods methodology to collect data. The data utilised for this article used a constructivist worldview that focussed on the subjective understanding and experience accumulation of learning through individual experiences (Burr 2003:4; Creswell & Poth 2018:24; Crotty 1998:54). The subjective meanings are varied and multiple, leading the researcher to look for complexity of views rather than narrowing meanings into few categories or ideas (Lincoln & Guba 2000:179; Mertens 2015:78). Therefore, only the qualitative data were used in this article.

The qualitative methodology explored the 'how, why, and at what rate' e-commerce is diffused among township SMEs in Soweto (Babbie & Mouton 2012:279; Daniel 2016:93; Leedy & Ormrod 2014:141; Maree 2020:109). The interviews were concerned with understanding or explaining how e-commerce was diffused into the business operations of the township SMEs (DeCuir-Gunby & Schutz 2018:89).

Data from Stats SA (2018) estimates the number of SMEs in South Africa to be 2.8m and that 46% of these SMEs are based in the Gauteng province, where Soweto is located (Cilliers 2018:2; Kalitanyi 2019:57), which formed the population of the study. The sample of the population for this research were Soweto-based SMEs registered on the Ekasi Entrepreneurship Movement, Transformation Legacy and Vuleka databases, which are organisations involved in small business enterprise development initiatives with township SMEs. The organisations contacted the Soweto-based SMEs on behalf of the researcher to obtain the voluntary participants of the research.

Fifteen interested Soweto-based SMEs responded and signed the consent forms to participate in the qualitative research voluntarily. Hamilton and Finley (2020:3) propose a minimum sample of between 5 interviews and 15 interviews, but saturation for the qualitative interviews was reached after eight interviews. Data collection ceased after saturation was reached.

The researcher collected qualitative data by conducting semi-structured, open-ended question interviews, which lasted around 45 min to 1 h. Seven open-ended interview questions were designed to probe Soweto-based SMEs' perspectives and experiences regarding the adoption and diffusion process of e-commerce into their business operations. These questions probed the considerations and factors that affected SMEs' decision to adopt e-commerce (or not), the usefulness of the technologies they adopted, the actual decision-making process and phases to acquire e-commerce, and the barriers encountered during and after the technology adoption. All interviews were audio-recorded which were transcribed verbatim into word processing files for analysis. The transcripts were checked for accuracy, and the data were organised into themes using ATLAS.ti. Transcripts and coded information were sent to each participant as part of the member-checking process to provide an opportunity for each participant to correct any misinterpretations assigned to the data to enhance the trustworthiness of the data and analysis process.

To analyse the qualitative data, initial codes were developed and compiled into a codebook, which served as a comprehensive reference for organising the database (Bowen, Rose & Pilkington 2017:18). The data were then coded and conceptually grouped, enabling the identification of key themes. This process allowed the researcher to draw interpretations from the data (Quinlan 2011:425).

Data triangulation from multiple sources (Ekasi Entrepreneurship Movement, Transformation Legacy, and Vuleka) was conducted through interviews and a literature review, further supported by effective note-taking, transcription and thick rich descriptions of the data. Participant validation was also employed to enhance credibility, dependability, confirmability, transferability and authenticity essential to the trustworthiness of the study. This process ensured an accurate reflection of the perceptions, experiences and voices of Soweto-based SMEs, thereby enhancing the study's trustworthiness.

Ethical considerations

Ethical approval for the study was obtained from the Department of Applied Management, Unisa Research Ethics Committee (reference no.: 2021_CRERC_046) at the University of South Africa. Participants' rights to privacy and anonymity were respected, and participants could withdraw at any stage of the research process.

Findings

Five main themes emerged from the data.

Theme 1: Perceived benefits

The perceptions from Soweto-based SMEs that were interviewed regarding how e-commerce enhances their capacity to serve clients more conveniently and efficiently to

reach a broader customer base remotely form a predisposition towards acquiring new competencies for the adoption of e-commerce. Participant 6 pointed out:

'I looked at how fast the ordering process would be and whether it would be easier for my clients because my clients reach me through phone or emails or WhatsApp so if I were to do it through and online store, would it be faster for them to contact me compared to the other platforms.' (Participant 6, Female, Small Bakery Owner)

'We maintain a close relationship with our customers. So, we do have Facebook pages ... and I have a WhatsApp group that's for business, so we add all our ex-clients to those groups so that we keep on interacting so that the communication does not break down ...' (Participant 8 – Female, Independent Antenatal Advisor & Facilitator)

Leveraging online platforms offers SME owners the flexibility to engage with their customers regardless of location or time, thereby improving service delivery, convenience, and efficiency. This influences their psychological inclination to learn how to utilise e-commerce. Participant 8 commented:

'I find it so useful considering the fact that it's less time consuming. Let's say for example compared to having to maybe travel to the clinic or around and spend time there, I can just use my social media handle to post whatever advert or poster that I have and I just keep on checking those posters for the client.' (Participant 8 – Female, Independent Antenatal Advisor & Facilitator)

Participants highlighted cost savings (reduced advertising costs and the provision of data-free access by certain platforms) as a motivating factor for their willingness to increase their absorptive capacity to enable them to utilise e-commerce. The adoption of e-commerce, even in light of the perceived intricacies associated with using the technology, resulted in significant operational time (less traffic congestion) and financially reduced (petrol) savings. Participant 4 added:

'Everything is about convenience; you don't actually need to drive off from wherever you are for you to come through to me. Look at this platform as we speaking right, you didn't have to waste your petrol to come where we are to discuss this ... it had quite a positive impact.' (Participant 4, Male, Window Tint Business Owner)

'It is actually useful, just remember when you doing events not only focusing on your area you going everywhere and anywhere ... there's no need for me to drive anymore there's no need for me to go to people and meet with them face to face. I can use e-commerce, I can use video, I can use zoom you know.' (Participant 7- Female, Independent Antenatal Advisor & Facilitator)

Considering that the majority of individuals were active on social media platforms, e-commerce offered SMEs immediate delivery of uninterrupted online marketing services digital platforms and tools allow SMEs to connect with a larger audience to promote their products and services compared to using traditional or non-digital methods freeing up additional time:

'You actually reach more ... so if I send it on WhatsApp and I send it on Facebook I get a lot there rather than me trying to go meet people face to face.' (Participant 7- Female, Independent Antenatal Advisor & Facilitator)

'I can say it [*business website*] is interactive because at the end of the day the moment you punch or whatever it is then I can be able to respond to you.' (Participant 4, Male, Window Tint Business Owner)

'There's no need for me to drive anymore, there's no need for me to go to people and meet with them face to face. I can use e-commerce, I can use video, I can use zoom you know.' (Participant 7- Female, Independent Antenatal Advisor & Facilitator)

Theme 2: Perceived ease of use

Following the principles of TAM, when using e-commerce requires less effort, SMEs are more inclined to adopt it because it becomes simpler and more service-oriented (Vahdat et al. 2020:188). The degree to which a particular technology was seen as user-friendly by both SME owners and customers emerged as a critical factor that positively influences the behaviour of the SME owner to embrace e-commerce skills. When e-commerce becomes straightforward to use, the advantages of using it become more apparent:

'I had to learn but the e-commerce is generally quite user-friendly because I am operating it from the back-end because orders are made in the front-end so I noticed that it's user-friendly, if anything I would say it's easy because once you put in an order it comes like an invoice that is populated, you see what the client wants and when they need the item.' (Participant 3, Male, Graphic Designer)

'It's not user-friendly and secondly, I feel that I do know how to get to the product market. It's basically your friends but the business side of it I am not really clued up on social media. I do not know how to basically engage the clientele on social media except for the ones that I have as friends yeah.' (Participant 4, Male, Window Tint Business Owner)

Participant 4 and Participant 5 both expressed a lack of confidence in utilising e-commerce, attributing this to the perception of a complex learning process that left them feeling disheartened:

'It's not user-friendly and secondly, I feel that I do know how to get to the product market.' (Participant 4, Male, Window Tint Business Owner)

'I used to feel like it's complicated to use those platforms [*Instagram & X*], I don't know, maybe I need to someone to teach me how to use them.' (Participant 5, Male, Tavern & Kiosk Business Owner)

Theme 3: Intrinsic and extrinsic motivation

Business growth stands as a primary objective for most SMEs to be intentional about acquiring the necessary skills to use e-commerce. The adoption of e-commerce affords SMEs expanded market access, a broader global presence, heightened market penetration and augmented revenue because of increased business growth in a more extensive geographic market. Participant 1 explains:

'I'm always pleased to get business from people in many different parts of the country, like people as far as Cape Town and Durban buy from me ... The biggest benefit is the ability to reach an audience out of your normal markets.' (Participant 1, Male, Auto Part Seller)

Some business owners highlighted that the adoption of e-commerce had not always resulted in increased business revenue. Participant 6 further elaborates:

'It does give me some money, but there isn't a huge increase in terms of the money I have been making then and the money I am making now in terms of e-commerce, it's basically still the same.' (Participant 6, Female, Small Bakery Owner)

Some participants established a connection between their proficiency in ICT knowledge and skills and the extent of cost reduction advantages associated with adopting and utilising e-commerce. Participant 3 added the following:

'I must add that I had to learn certain things so that I can cut costs, because I had to make monthly payments ... so in order to cut the monthly costs I had to go learn, hence I said that when I realised I could do the e-commerce by myself there was no need to find someone to do it for me.' (Participant 3, Male, Graphic Designer)

Most participants are of the opinion that the expansion of their businesses into new geographical markets through e-commerce holds substantial influence over their decision to develop new skills and embrace the usage of e-commerce.

Theme 4: New skill acquisition

The entrepreneurial orientation of SME owners encompasses their characteristics, proactiveness and approach to embracing new innovations (Zhai et al. 2018:3). Participants acknowledged that technological skills were something new to them, expressing a strong eagerness to acquire new knowledge and receive guidance on incorporating e-commerce into their businesses:

'It took me quite a while in terms of learning how to upload the catalogues, pictures and pricing on the online shop. It took me about two to three months because I wasn't sure how it worked but I ended up getting the hang of it.' (Participant 6, Female, Small Bakery Owner)

'Coming to IT skills, in most cases it's not every one of us who are very much IT equipped, so you also have to sort of enhance your IT skills by upgrading a little ... For me, the good thing is that I had sort of a background of how to use a computer, computer literacy, so I knew the basics.' (Participant 8 – Female, Independent Antenatal Advisor & Facilitator)

In cases where the SME owner lacks confidence in their ICT literacy, they may consider employing individuals with IT knowledge and skills to help manage and mitigate potential risks. Participant 2 commented: 'I make sure I get the right people who understand technology works'. The age of the business owner can influence their readiness to acquire new skills. Some participants expressed reservations about embracing new concepts and fully exploring the benefits that e-commerce could offer to their businesses. Participant 5, Male, Tavern & Kiosk Owner said: 'You know, I am a bit too old for technology'.

The dimensions of entrepreneurship orientation, including proactiveness and a propensity for risk-taking, significantly boost entrepreneurs' eagerness to acquire new technological

knowledge that will allow them to fully utilise e-commerce. Participants provided detailed insights into how they were learning how to utilise e-commerce to secure a competitive edge, explore new markets, and broaden their marketing and payment alternatives, all of which they had achieved through acquiring the new skills to implement and use e-commerce:

'It wasn't really easy to conduct the business online, but I think that helped to have more skills about marketing online, using social media and I think as time went on, we get to strategise how you can actually get your clients.' (Participant 8 – Female, Independent Antenatal Advisor & Facilitator)

Small and medium-sized enterprise owners also discussed their initial challenges with using e-commerce. Some found it to be complex, while others viewed it as a matter of being receptive to new learning experiences. Despite the considerable time required for the learning process, the majority of participants exhibited a positive attitude towards acquiring the necessary skills for e-commerce usage. These findings align with the concept that complexity influences the adoption of e-commerce by SMEs:

'I didn't do any training, but it took me quite a while in terms of learning how to upload the catalogues, pictures and pricing on the online shop. It took me about two to three months because I wasn't sure how it worked but I ended up getting the hang of it.' (Participant 6, Female, Small Bakery Owner)

'I must add that I had to learn certain things so that I can cut costs, because I had to make monthly payments ... to cut the monthly costs I had to go learn ... I could do the e-commerce by myself there was no need to find someone to do it for me.' (Participant 3, Male, Graphic Designer)

Small and medium-sized enterprise owners acknowledged the crucial role of effective management in facilitating the seamless integration of e-commerce into their business operations, but a basic knowledge of computer literacy is advantageous:

'[I]n most cases it's not every one of us who are very much IT equipped, so you also have to sort of enhance your IT skills by upgrading a little ... I had sort of a background of how to use a computer, computer literacy, so I knew the basics.' (Participant 8 – Female, Independent Antenatal Advisor & Facilitator)

Theme 5: Organisational readiness

The process of SMEs adopting e-commerce can be intricate, influenced by various factors related to the enterprise's strategic orientation, available resources and the business environment. Most SMEs were cognisant of their preparedness to undergo substantial changes to enhance their absorptive capacity to incorporate e-commerce in their businesses. They also acknowledged the significance of assessing the essential resources and competencies required to prepare for and embrace the adoption of e-commerce:

'I know that I have to be computer literate. Know how systems work, how computer networks work, know how other people respond to me, make sure I get the right people who understand technology works.' (Participant 2, Male, Electrical Engineering Business Owner)

Interviewees frequently conveyed that understanding the procedures associated with e-commerce adoption and gaining familiarity with it was an incremental process that required time:

'So, I'm just implementing things slowly but surely because not everyone is acquainted with the actual process.' (Participant 6, Female, Small Bakery Owner)

'Make sure I get the right people who understand technology works.' (Participant 2, Male, Electrical Engineering Business Owner)

The alignment of e-commerce with their existing systems required an understanding of how the system functions. This comprehension was essential to facilitate the system's implementation and seamless integration into their established business operations:

'I know that I have to be computer literate. Know how systems work, how computer networks work, know how other people respond to me.' (Participant 2, Male, Electrical Engineering Business Owner)

Discussion of findings

The data indicated that the Soweto-based SMEs who participated in the research had successfully acquired different types of e-commerce technologies which was different to what the researcher had expected. Many businesses were also formally registered. Based on TAM, SME owners are more likely to adopt e-commerce if they perceive a higher level of benefits (Iyamu 2020:2; Schmidhuber et al. 2020:8). By adopting e-commerce, SMEs can benefit from increased market accessibility, wider global reach, increased market penetration and greater revenue (Fitriasari 2020:57; Helkkula et al. 2018:284; Iyamu 2020:2; Tseng et al. 2019:60). The findings of the present study indicate that numerous factors play a role in shaping the willingness of the participants of this research to acquire new skills and adopt e-commerce. In the study, the perceived benefits of using e-commerce were found to play a significant role for the participants to invest the necessary time to acquire the knowledge and skills required for using e-commerce. Most of the participants prioritise business growth as a key objective. Consistent with TAM, participants commonly noted that e-commerce simplifies the arduous and time-consuming processes of traditional customer interactions and communication channels (Matyila 2019:70; Selase et al. 2019:5).

The perceived usefulness and potential benefits of e-commerce have made it one of the fastest-growing domains for SMEs globally (Costa & Castro 2021:3044; Ezzaouia & Bulchand-Gidumal 2020:3; Ocloo et al. 2020:191; Susanty, Handoko & Puspitasari 2020:386; Xuhua et al. 2019:81). Participants of this research demonstrated that perceived usefulness in improving operational efficiency and innovation, enhancing customer and supplier relationships, reducing costs, increasing market reach and improving business performance significantly influenced their decision to adopt e-commerce. The reduced time to connect with a broader customer base regardless of geographical boundaries,

reduced operational costs and the inconvenience of meeting customers in person all positively influenced e-commerce adoption. Marketing and sales efforts could become more focussed on specific target markets, and the capacity to learn was also stimulated as a result which in turn positively impacted business performance.

This result aligns with prior research that underscores the importance of perceived e-commerce benefits and their substantial impact on SME owners' decision to acquire new abilities and embrace the use of e-commerce (Triandini et al. 2020:112; Zhelyazkova 2020:263). In line with TAM, perceived ease of use positively impacts the behavioural intention of Soweto-based SME owners towards e-commerce usage (Babić & Golob 2018:1377). These results are consistent with the findings of Effendi, Sugandini and Istanto (2020:917) as well as Salem and Nor (2020:19) who assert that mental effortlessness provided by e-commerce positively affects attitudes and attracts more adoption behaviour by SMEs. Based on TAM, less effort going into using e-commerce results in a greater inclination to use e-commerce by SMEs because it is easier and more service-oriented (Vahdat et al. 2020:189; Yusoff et al. 2021:1838).

The data indicated that Soweto-based SME owners that participated in the research have a high level of intrinsic and extrinsic motivation and are more likely to exploit e-commerce technology to achieve higher business benefits, better operational efficiency and be competitive by staying ahead of industry trends, aligning with MM (Kathin 2023:178). Furthermore, consistent with intrinsic motivation, the data show that most SMEs are willing to take the time needed to learn how to use the technology (Das 2019:283). Additionally, in line with Hoang et al. (2021:53), the results revealed that diversity aspects such as the characteristics of the SME business owner, including age and level of education, employees' absorptive capacity and technological characteristics such as ease of use, compatibility and complexity are influencers to the behaviour of the SME owner towards the usage of e-commerce.

The results verified that the commercial, technical, and social infrastructure, as well as the availability of financial and technological resources, are essential for facilitating the adoption of e-commerce for Soweto-based SMEs that took part in the study. Where SME owners are unable to use e-commerce, they should be able to employ staff that can assist them in incorporating e-commerce resources. The findings support the integration of TAM and MM by demonstrating that perceived benefits, ease of use, intrinsic and extrinsic motivations, demographic characteristics and organisational readiness significantly influence Soweto-based SME owners' willingness to acquire new skills and adopt e-commerce.

Conclusion

In conclusion, the findings of this study underscore the multifaceted nature of factors influencing the willingness of

Soweto-based SME owners to acquire new skills and adopt e-commerce. Notably, the perceived benefits of e-commerce emerged as a pivotal motivator, along with SMEs prioritising business growth, increased market accessibility, global reach, market penetration and enhanced revenue. Established theories such as TAM and MM in this research were suitable in highlighting the significance of perceived benefits and ease of use in shaping SME owners' behavioural intentions towards e-commerce adoption.

Intrinsic motivation emerged as a significant factor, playing a pivotal role in the willingness of SME owners to embrace e-commerce. This motivation reflects their inherent interest and personal satisfaction derived from the process of acquiring new skills and knowledge, independent of external rewards or recognition. The importance of motivational factors in shaping the e-commerce adoption decisions by SMEs is reinforced by intrinsic and extrinsic motivation. The results further stress the role of diverse characteristics, including age, education level and employees' absorptive capacity, in influencing SME owners' attitudes towards e-commerce adoption. Older SME owners seem less ready to adopt e-commerce. Furthermore, organisational readiness emerged as a substantial determinant facilitating the adoption of e-commerce among SMEs.

The findings contribute to the current knowledge base by offering nuanced insights into the complex dynamics that motivate SME owners to adopt new skills and e-commerce technologies in Soweto. The government could use this study to tailor support programmes for SMEs. Future research endeavours might delve into diverse aspects of e-commerce adoption, extending the investigation to other South African townships for a more comprehensive understanding. A mixed-methods study across multiple townships could offer comparative insights into the motivational levels of e-commerce adoption among SMEs. Additionally, employing a longitudinal approach in future research could enhance our understanding of the evolving motivations among SMEs in Soweto.

The study has limited transferability because it focussed on SMEs in Soweto, which may not fully represent the broader spectrum of SMEs in South Africa. While the qualitative methodology provided valuable insights, it posed challenges in accessing SMEs for consultations or additional data collection. Lastly, the cross-sectional design provides only a snapshot, limiting the study's ability to capture changes over an extended period.

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Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

This article is part of a larger PhD study. N.D.D.G. conceptualised the study, collected data, analysed the results, and wrote the first draft of the article. E.E. and A.P.A.-E. supervised the study, providing guidance and editorial updates to the article after its completion.

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Data availability

The data that support the findings of this study are available from the corresponding author, A.P.A.-E. upon reasonable request.

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