African Journal of Hospitality, Tourism and Leisure. ISSN: 2223-814X

April 2023, Vol 12, 2, pp. 717-734

The Adoption of Digital Technologies by Women-owned Tourism Micro-enterprises

Thapelo R. Mametja*
School of Tourism and Hospitality, College of Business and Economics, University of Johannesburg, South Africa, Email, trs.mametja@icloud.com

Marcia M. Lebambo
School of Tourism and Hospitality, College of Business and Economics, University of Johannesburg, South Africa https://orcid.org/0000-0002-2944-6802

Tembi M. Tichaawa
School of Tourism and Hospitality, College of Business and Economics, University of Johannesburg, South Africa, Email, tembit@uj.ac.za
https://orcid.org/0000-0002-1913-3730

Corresponding Author

How to cite this article: Mametja, T.R., Lebambo, M.M. & Tichaawa, T.M. (2023). The Adoption of Digital Technologies by Women-owned Tourism Micro-enterprises. African Journal of Hospitality, Tourism and Leisure, 12(2):717-734. DOI: **https://doi.org/10.46222/ajhtl.19770720.395**

Abstract

Digital technologies have become increasingly prevalent in the tourism sector. However, limited attention has been given to their adoption by women-owned tourism micro-enterprises. This study explores the enabling and limiting conditions of adopting digital technologies by women-owned tourism micro-enterprises in a South African context. Grounded within an integrated framework combining the Technology Acceptance Model and the Technology-Organisation-Environment model, the study adopted a qualitative grounded theory approach and used in-depth interviews to collect data from 20 female owner-managers of tourism micro-enterprises. The key findings of the study show that the enabling and limiting conditions of adopting digital technologies by these enterprises are influenced by a set of factors, including compatibility, firm size, financial resources, government support, information communication and technology infrastructure, security concerns, COVID-19, perceived ease of use, and perceived usefulness of digital technologies. As such, these enterprises require support tailored to their digitalisation maturity level and access to key resources such as finance and human capital. Overall, this study contributes to a deeper understanding of the complex and dynamic process of adopting digital technologies by women-owned tourism micro-enterprises.

Keywords: Technology acceptance model; technology-organisation-environment model; tourism digitalisation; micro-enterprises; women entrepreneurs

Introduction

Small, medium and micro-sized enterprises (SMMEs) in the tourism industry are increasingly pressured to embrace digital technologies to avoid falling behind in the ongoing digital transformation. This pressure is even more pronounced for women-owned tourism micro-enterprises, as they confront a range of unique challenges. Micro-enterprises often face constraints such as a lack of access to financial resources and employees who are technologically skilled (Hassan et al., 2011). Additionally, women entrepreneurs encounter obstacles such as a lack of relevant skills, gender stereotypes and digital exclusion amongst other issues (; Mariscal et al., 2019; Ojo & Segone, 2022; Orkoh & Viviers, 2021, Rashid,

2016). Consequently, it is imperative to explore the factors which enable adoption, to amplify them, and address those that limit adoption.

Enterprises that can effectively adopt digital technologies benefit from improved customer experiences, efficiency and effectiveness, cost reduction, productivity growth, and competitive advantage (see Bellakhal & Mouelhi, 2020; Ciurea et al., 2021; Opute, et al., 2020; Pfister & Lehmann, 2021). Presently, more than ever before, SMMEs are positioned to compete for global markets with multinational corporations, due to reduced entry barriers, increased transparency and reinvented distribution channels, brought about by the digital transformation (Peeters & Weston, 2015). The Organization for Economic Co-operation and Development (OECD) (2021) has urged SMMEs to take part promptly in the digital transformation, as the benefits therefrom are especially likely to accrue to early adopters.

In the quest to accelerate the adoption of digital technologies by SMMEs, evidence from extant literature show that, despite the overarching benefits provided by digitalisation, the adoption of digital technologies by SMMEs should not be considered as 'one size fits all' (Bvuma & Marnewick, 2020). Digitalisation involves using different technologies for different purposes. Moreover, various SMMEs face unique challenges, requiring support according to their level of digitalisation and size (Ciurea et al., 2021; OECD, 2021).

In South Africa, studies have shown that the majority of SMMEs have embraced the use of basic ICT devices, like computers, phones and Wi-Fi, and of digital technologies, like email, websites and social media marketing (Bvuma & Marnewick, 2020; Cant et al., 2016; Fosu, 2018; Marnewick, 2014; Osman et al., 2019). E-commerce is widely used by businesses with markets that exceed the local level (Ndayizigamiye & Khoase, 2018). SMMEs in the tourism sector are enterprises that, among others, significantly use e-commerce (Henama & Apleni, 2020; Mbatha & Ngwenya, 2018).

Since the emergence of the COVID-19 pandemic in late 2019, SMMEs have increased their use of digital technologies, to enable remote working and contactless service provision, due to travel restrictions and to social distancing regulations. Reports from the OECD (2021) and from the World Economic Forum (WEF) (2021) estimate that over 70% of SMMEs worldwide intensified their use of digital technologies in response to the pandemic.

Therefore, an urgent need exists to redirect the research focus toward the adoption of digital technologies by SMMEs in South Africa. In doing this, however, scholars need to unbundle the SMME cohort and focus on the heterogenous nature of the enterprises according to their size. The current literature in South Africa considers SMMEs as a monolith, meaning that what is learned about the adoption of digital technologies by medium-sized enterprises is, erroneously, generalised to apply to small and micro-sized enterprises. Bvuma and Marnewick (2020) emphasised that the nature of SMMEs is that which is complex and dynamic. As a result, there is a need for an in-depth investigation of their adoption of digital technologies.

The current study attempts to close the literature gap, through focusing on women-owned tourism micro-enterprises. Some studies have shown that most women actively participate in tourism entrepreneurship through micro and survivalist enterprises (Ntanjana & Mangwane, 2019; Valeri & Katsoni, 2021). These enterprises are prone to lag behind during digital transformation, due to their small size (OECD, 2021). Therefore, the aim of this study was to investigate the enabling and limiting conditions of adopting digital technologies by women-owned tourism micro-enterprises. The digital technologies concerned are categorised as e-business (email, website, and digital marketing), e-commerce (business-to-business and business-to-customer), and smart tourism (live stream tourism). Furthermore, in this paper, micro-enterprises are considered to be owner-manager centric by definition and have a stronger command-and-control culture than in small and medium-sized enterprises (see Inan & Bititci, 2015; Gherhes et al., 2016; Jaouen & Lasch, 2015). Micro-enterprise owner-managers also

tend to start a business as a life strategy rather than a business strategy (hedonism) and for subsistence purposes (Jaouen & Lasch, 2015). Decision-making relies on information obtained informally and subconsciously on a day-to-day basis as opposed to formal approaches such as market research (Greenbank, 2000).

Literature review

Evolution of digital technologies and tourism

Digital technologies have been transforming tourism globally. During the e-tourism era (1996 to 2004), businesses were able to establish a Web 1.0 presence through the use of websites and electronic commerce (e-commerce) (Buhalis, 1998, 2003; Buhalis & Law, 2008). Employing Google, as a search engine, and web portals such as Yahoo revolutionised information searching and accessing (Paraskevas et al., 2011; Xiang et al., 2008). The development of blogs, user-generated content sites (e.g. TripAdvisor), and social media platforms (e.g. Facebook, Twitter and YouTube) introduced the Web 2.0 era (2004 to 2016), which encouraged user interaction, as well as empowering broad engagements across online travel communities (Buhalis & Law, 2008; Tichaawa et al., 2017; Chamboko-Mpotaringa & Tichaawa, 2021a; Chamboko-Mpotaringa & Tichaawa, 2021b). The third generation of the web, Web 3.0, was, at the time of the current study, ongoing, with it being driven by semantic web technologies, distributed databases, machine learning, recommendation agents and artificial intelligence (AI) technologies (Pencarelli, 2020). Also, simultaneously underway was Web 4.0, which has yet to be extensively explored by academia and in practice (Aghaei et al., 2012; Pencarelli, 2020). According to Pencarelli (2020), the use of Web 4.0 is bound to intensify the human–machine interconnection known as 'symbiosis' leading to the opening of new experiences for travellers through the employment of virtual reality (VR) and augmented reality (AR).

Recently, during the peak of the COVID-19 pandemic, tourism enterprises deployed innovative solutions to be able to continue operating under unprecedented measures of restricted travel and social distancing. Destinations used AR, like Quick Response (QR) Code to disseminate information (Azmadi et al., 2022), and virtual reality (VR) to substitute for travel (Sarkady et al., 2021; Schiopu et al., 2021). Some of these measures adopted during the COVID-19 pandemic are likely to continue into the future (Hall et al., 2020). Mohanty et al. (2020) stated that there is a possibility that the demand for both mobile and web-based AR is likely to continue to create experiences that are unique, accessible, personalised, context-specific, deep, and memorable for tourists.

The economic significance of micro-enterprises

Micro-enterprises play a significant role in creating jobs and income-earning opportunities in many economies across the world (Criscuolo et al., 2017; Endris & Kassegn, 2022; Guci & Ghazali, 2019; Tumiwa & Nagy, 2021). According to the OECD (2013), micro-enterprises represent 70% to 95% of all enterprises in most countries. In half of OECD countries, microenterprises account for more than 90 percent of total enterprises, with the highest proportion of micro-enterprises found in the services sector. In Africa, micro-enterprises and self-employment are responsible for an estimated 80 percent of jobs, representing an essential driver of economic growth).

In South Africa, measuring the contribution of micro-enterprises to economic activity, job creation, and income-earning opportunities is challenging for several reasons. When measuring the impact of micro-enterprises, micro-enterprises are frequently conflated with small and medium-sized enterprises (Bhorat et al., 2018; Bvuma & Marnewick, 2020; International Finance Corporation [IFC], 2018). According to United Nations Development

Programme South Africa [UNDPSA] (2020), the number of micro-enterprises in South Africa is around 3.3 million. The contribution of micro-enterprises together with small and medium-sized enterprises to gross domestic product is estimated to be between 34% and 36% (Herrington et al., 2017; IFC, 2018). In terms of employment, SMMEs contribute between 50% to 60% of South Africa's workforce (IFC, 2018).

Theoretical and conceptual grounding

This study adopts a binary conceptual framework that incorporates the Technology Acceptance Model (TAM) and Technology-Organisation-Environment (TOE) framework. The TAM was conceptualised by Davis (1989) in an attempt to conceive a high-quality theoretical output that can be applied to understand determinants of users' acceptance of technology. Davis (1989) proposed two theoretical constructs, perceived usefulness (PU) and perceived ease of use (PEOU) to better predict and explain user's acceptance of technology. According to Davis (1989), PU denotes an individual's conviction that utilising a specific system would improve their job performance, while PEOU reflects their perception of it as being effortless to operate. The theory suggests that if a user perceives technology as being valuable and user-friendly, they are likely to be willing to adopt it (Davis, 1989).

The TAM is generally accepted by academic research and has been widely used in various fields and contexts. Several studies in the global South have utilised the TAM to investigate the adoption of digital technologies by tourism SMMEs (see Abou-Shouk et al., 2016; El-Gohary, 2012; Lebambo, 2014). However, like any other theoretical or conceptual model, the TAM has limitations. These limitations are succinctly outlined in the literature (Ajibade, 2018; Awa, et al., 2012; Bagozzi, 2007; Lim et al., 2016; Tripopsakul, 2018). Bagozzi (2007) argued that the simplicity of the TAM – using two constructs, PU and PEOU – to determine the decision to adopt or not adopt technology had enticed researchers without considering its inherent limitations. This has led to researchers ignoring key antecedent variables such as environmental factors that may influence decisions and actions (Bagozzi, 2007). According to Alshammari and Rosli (2020), PU and PEOU can be influenced by many external factors that may affect technology adoption and use. Due to these limitations, the TOE framework is also considered to compensate for the limitations.

Tornatzky and Fleischer (1990) developed the TOE framework to assess which other external constructs may influence the adoption of new technology. The TOE framework is a firm-level theory that explains how three different elements of a firm's context influence adoption decisions. The three elements are technological, organisational, and environmental contexts (Tornatzky & Fleischer, 1990). The technological context refers to both the internal and external technologies that the firm uses. This includes those already implemented in the firm (Starbuck, 1976) and those that can be accessed outside of it. On the other hand, a firm's organisational context is determined by its size; the centralisation, formalisation, and complexity of its management structure, the quality of its human resources, and the financial resources available to it. The environmental context relates to the firm's industry, competitors, access to resources, and interactions with the government. Tornatzky and Fleischer (1990) argued that all these factors could influence a firm's ability to recognise the necessity of, seek out, and adopt new technologies.

Both TAM and TOE frameworks used to understand factors that lead to the adoption and use of technologies in various contexts. However, both theoretical models have limitations. The literature suggests that the TAM is a deterministic model since it focuses only on a user's psyche and neglects other factors that may influence technology adoption (Idris et al., 2017). The TOE framework, on the other hand, is criticised for its imprecise and inconsistent constructs and variables that vary depending on context (Wang et al., 2016). As a result, using

a single theory may not be enough to explain the contextual issues that influence the adoption of technologies (Idris et al., 2017).

In order to understand the contextual issues at play when SMMEs adopt e-commerce, Ghobakhloo et al. (2011) suggested that the TOE framework may provide a foundation for studying the factors that influence digital technology adoption. Nonetheless, the framework would need to be strengthened by integrating it with a model like TAM, which has explicit constructs (Gangwar et al., 2014). Tripopsakul (2018) noted that combining the two models can help overcome the unclear constructs of the TOE framework and the undefined external constructs of the TAM. The resulting model would provide a holistic theoretical lens for understanding the adoption of technologies by SMMEs in developing countries (Awa et al., 2012; Gangwar et al., 2014).

Similarly, in this study, the integrated TAM-TOE framework allowed the researchers to consider the broader context (technology, organisation, and environment) in which the adoption of digital technologies takes place while also focusing on individual users' psyche relating to PU and PEOU. It is essential to draw on the theoretical strengths of the two models in this study for two reasons. First, micro-enterprises are owner-manager centric (Gherhes et al., 2016; Inan & Bititci, 2015; Jaouen & Lasch, 2015), which implies that the owner-manager's individual psyche plays a crucial role in decision-making. Second, micro-enterprises are also affected by organisational and environmental contexts, albeit to varying degrees depending on the enterprises organisational structure and formalisation. The integrated TAM-TOE conceptual framework enabled the researchers to holistically investigate the adoption of digital technologies by women-owned tourism micro-enterprises.

Methodology

The current study used a qualitative research approach. The premise of a qualitative study is to comprehend the meaning that individuals or groups attach to a social or human problem. A constructivism paradigm was adopted in order to understand how women entrepreneurs who own tourism micro-enterprises construct their reality in relation to the adoption of digital technologies, particularly in relation to the enabling and limiting conditions.

Therefore, a grounded theory approach was considered in order to explore the participants' reality concerned with the adoption of digital technologies. According to Vollstedt and Rezat (2019), grounded theory is suitable for studies that lack a theoretical foundation, or the existing theories are insufficient in that they lack important concepts, the relationships among the concepts are not elaborated enough, and the relevance of the concepts and their relationships has not been corroborated for the population or the context under the study.

The study population consisted of women entrepreneurs who owned tourism micro-enterprises based in Johannesburg, Gauteng. The units of analysis were women-owned tourism micro-enterprises based in Johannesburg, Gauteng, which operated in the subsectors including tour operators, travel agencies and events. Furthermore, to be included in the study, the enterprises needed to have been in operation for at least one year and to have been formally registered with the Companies and Intellectual Property Commission (CIPC). Table 1 shows the location, number of years of operation and number of employees of the study sample. To identify the sample, two non-probability sampling techniques were used, namely purposeful sampling and snowball sampling. A total number of 20 female owner-managers were recruited and data saturation was reached.

Table 1: Sample profile

Identifier	Location	Type of establishment	Number of years in operation	Number of full-time employees
R1	Ormonde, Johannesburg	Travel agency	7	2
R2	Marshalltown, Johannesburg	Tour operator	1	0
R3	Braamfischerville, Johannesburg	Tour operator and events	1	0
R4	Alexandra, Johannesburg	Tour operator	6	2
R5	Soweto, Johannesburg	Tour operator	8	0
R6	Soweto, Johannesburg	Travel agency	7	0
R7	Mfolo North, Johannesburg	Tour operator	3	0
R8	Braamfontein, Johannesburg	Travel agency	2	2
R9	Randburg, Johannesburg	Travel agency	2	0
R10	Sandton, Johannesburg	Tour operator	3	0
R11	Sandton, Johannesburg	Tour operator	35	4
R12	Sandton, Johannesburg	Travel agency	6	2
R13	Hyde Park, Johannesburg	Tour operator	24	0
R14	Roodepoort, Johannesburg	Tour operator	1	0
R15	Sandown, Johannesburg	Tour operator	4	2
R16	Fourways, Johannesburg	Tour operator	3	0
R17	Sunninghill, Johannesburg	Tour operator	3	2
R18	Fourways, Johannesburg	Tour operator	4	5
R19	Woodmead, Johannesburg	Tour operator	5	7
R20	Eldorado Park, Johannesburg	Tour operator	2	0
*** 'R' in column one stands for 'respondent', which is accompanied by their allocated number. * The number of full-time employees given in column five excludes owners/managers, while '0' indicates enterprises without full-time employees.**				

Source: Authors

The data were collected through semi-structured in-depth interviews. At the heart of such interviews is the desire to learn about a participant's beliefs regarding, or perceptions or accounts of, a particular topic and the significance that they might have. The semi-structured interviews conducted used an interview guideline, which governed the administration of specific open-ended questions. The flexibility of the semi-structured interview used also allowed the researchers to ask follow-up questions, to prompt the giving of detailed and specific responses by the participants. The interviews were conducted face-to-face and lasted for approximately 50 minutes on average. The interviews were transcribed verbatim and analysed with the assistance of computer-assisted qualitative data analysis software (CAQDAS).

Results and discussions

Types of digital technologies utilised

Table 2 shows that the enterprises have adopted e-business technologies such as email, website and digital marketing. These tools are used to increase business efficiency and brand awareness. In terms of e-commerce adoption, Table 3 shows that two types of e-commerce transactions are carried out, business-to-business (B2B) and business-to-consumer (B2C). The adoption and use of the digital technologies are not uniform across the enterprises.

Table 2: Digital technologies used

Digital technologies used	Number of users (out of 20 total)	Reasons for usage
E-business technologies		
Email	20	External communication with suppliers, intermediaries and customers for enquiries and bookings; internal communication with employees for information sharing
Website	17	Sharing information about company and products; boosting business image and legitimacy; and facilitating online mail orders.
Digital marketing	19	Brand awareness; and sales lead

Table 3: Types of e-commerce tools

Types of e-commerce tools	Total n= 20	How transactions are facilitated
Business-to-business		
Supplier website transactions	20	Booking of accommodation; purchasing of flight tickets; and car rental
Manual transactions through email, telephone, and social networks	20	
Global distribution system	3	
Business-to-customer		
Conventional	2	Customers' purchasing journey occurs fully on an enterprises' website from catalogue browsing to checkout.
Unconventional	20	Customers purchase products off-website by interacting directly with enterprise owner-manager or salesperson through email, social networks and phone calls. Payments are made electronically via online banking, mobile banking or Automated teller machine (ATM) deposits.

The enabling and limiting conditions

The adoption of digital technologies by women-owned tourism micro-enterprises is a dynamic and complex phenomenon. The factors which create the enabling and limiting conditions identified from the TAM-TOE framework are discussed below.

Compatibility

Compatibility is understood to be the extent to which an innovation is perceived as conforming to the values, past experiences, and requirements of potential adopters. As such, the micro-enterprises investigated in this study adopted digital technologies which they considered as compatible with their business operations. E-business and e-commerce technologies were considered as compatible albeit to various extent and use. Each enterprise decided on how to use the digital technologies in a manner that 'fit' with their enterprise and consistent with their 'needs'. For example, most enterprises built a website without payment facilities, and favoured facilitating payments in an unconventional manner. One owner-manager explained:

> … to have PayFast or PayPal integrated into the website would not work, because clients can't just book off our website like they would like [with] online shopping. The way PayPal and PayFast would work is, once they've accepted the quote I've sent; I can then send them our PayFast or PayPal link, and then they can pay for what I've said, but, from the get-go, it wouldn't work on our website. (R14)

On the other hand, live streaming for tourism (LST) was considered incompatible due to a lack of interpersonal connection and income feasibility as can be seen in the quote below:

> The thing is, you have to travel to that place, and how do you charge [for] it, because a person doesn't get [the real experience]. Travel is about experience. It's about feeling. It's about talking to people. It's about experiencing the culture, a food experience, a tour experience, when you're in a different place. It's not the same as streaming it through the internet. It depends on how you do it, and on whether you've got the capacity to do it. For me, I found it a bit difficult. (R19)

The study results also indicated that the perception of compatibility is not uniform across all digital technologies and users. For example, Table 3 reveals that most enterprises facilitate their B2C e-commerce transactions in an unconventional manner. Many of the owner-managers did not see the need to build a website that could facilitate payments, because they did not sell products that could be purchased from a website. These findings support Freeme and Gumede's (2012) findings that the majority of South African SMMEs are yet to integrate payment processing facilities into their websites. However, in the context of the present study,

tourism micro-enterprises' decision not to integrate payment processing facilities into a website is not due to reluctance, as suggested by Freeme and Gumede (2012).

Firm size

The study findings reveal that access to financial resources and human capital enables the adoption and effective use of digital technologies. On the other hand, constrained financial resources and lack of human capital limits the adoption and use of digital technologies. The enterprises investigated in the present study were classified as micro, which might have implied that their financial resources and human capital were proportional. However, the study results show that small differences in financial resources or human capital can make a big difference in terms of whether or not an enterprise can adopt and use certain digital technologies effectively.

For example, owner-managers who worked alone were responsible for all aspects of the enterprise including handling enquiries, bookings, finances, and digital marketing. This limited the owner-managers ability to optimally use digital marketing. A tour operator owner-manager explained:

> … it's always about algorithms and engagements and insights. You have to be on the ball constantly, and because I'm alone in this, I do marketing, I do sales, I do admin, I do the booking when it comes in, I do my social media. I'm literally doing everything, and I could slip, you know, I could miss something, and not have the time to engage 24/7 on social media. That's my challenge at the moment, my marketing, and not being able to find the time. (R14)

On the other hand, enterprises with human capital were better equipped to effectively use the adopted digital technologies. A tour operator owner-manager with skilled employees dedicated to digital marketing emphasised:

> The marketing team is constantly monitoring the impressions, the reviews and things like that to sort of stay relevant, to give the audience what they're looking for, and just really to just keep up to make sure that you are there because you can't go a week without being present. (R18)

Access to financial resources also enabled the enterprises to keep their websites updated and engage in paid promotions or ads to market their business. The study results support Gono et al.'s (2016) findings that the size of a firm determines its ability to finance ICT and obtain the required skills. The findings contradict Matikiti et al.'s 2012) conclusions that firm size does not influence the adoption of digital marketing.

Financial resources

The participants identified a lack of financial resources as a limiting condition for the adoption of digital technologies. The few enterprises that did not have a website cited a lack of finances as the reason. A tour operator owner-managed explained:

> I'm not generating enough money that I was wishing I could [generate] before COVID happened. It's difficult to even have a website at the moment. I'm doing most things manually. (R7)

In addition, access to financial resources determined the extent to which the enterprises engage in digital marketing. Enterprises with financial resources engaged in paid digital marketing (Google ads, social media promotions) which resulted in more leads. In comparison, enterprises with constrained budgets focused on organic digital marketing which often led to non-monetary

benefits, like brand awareness. A tour operator and events enterprise owner-manager elaborated:

> Capital is a big element, or limit, or deters, or something that seems to make things go a little bit slower. I know if capital was a little bit better, my business would be doing much, much better, like it would be flying, because I would be publishing and boosting all my ads on my social media, as often as I think I would need to. That's the main thing, because, how do I reach people when I don't have capital to advertise? I rely a lot on organic means, and then, when I do have the revenue, then I try and boost [my digital marketing]. (R3)

In terms of e-commerce, the micro-enterprises favoured payment methods that had fewer financial costs. Another tour operator owner-manager emphasised the importance of being financially conservative:

> To go and introduce additional methods and pay additional monthly rates for a system that we might not necessarily use every day, it just doesn't make any sense, because they're all costs to your business. You don't want to rack up unnecessary monthly costs in your business that are not necessary. So, until such time that I feel that there's demand from customers to have all these online payments, or this or that, I'm really not going to fuss about it right now. Maybe in the future we'll see what happens … (R17)

The study results corroborate other studies which have cited lack of financial resources as a limiting condition for the adoption of ICTs and digital technologies (Bvuma & Marnewick, 2020; Cant et al., 2016).

Technological skills

Access to technological skills was identified as an enabling condition for the adoption of digital technologies. The results also indicated that technological skills influenced the level and complexity of use of the digital technologies. For example, owner-managers who possessed digital marketing skills or employed people with such skills used digital marketing more effectively in comparison to their counterparts with limited skills. A tour operator owner-manager explained:

> I have a very strong marketing background, having worked for all the big companies, and my business partner is also ex-corporate. She worked for IBM, and she was in a communications role. She had a very strong communications role. Her last position was a communication manager for Africa and [the] Middle East, the Middle East and Africa (MEA) region I think, that's [the] Middle East and Africa. Between my marketing skills and her communication skills, through the lens of social media, this is how we've built our business. (R10)

The above findings are consistent with Matikiti et al. (2018) who also found that technical knowledge influences the adoption and level of use of social media marketing. In cases where technological skills and experience lack, the micro-enterprises may still adopt certain digital technologies at the cost of not being able to use them effectively.

Government support

The participants interviewed were found to have divergent views on the role of the government in helping micro-enterprises adopt digital technologies. Some respondents were oblivious to the support programmes offered by the government and maintained that it is not the

government's responsibility to help micro-enterprises adopt digital technologies. One tour operator owner-manager shared their view:

> I can't think of anything that the government could do. I don't think it's their responsibility, in my opinion. (R11)

On the other hand, other participants perceived that the government could assist micro-enterprises indirectly to adopt digital technologies through facilitating development programmes, workshops, and private-public partnerships (PPPs), to enhance awareness and digital skills. A tour operator owner-manager who attended a government-sponsored workshop emphasised the importance and value of such initiatives:

> We had a three-day workshop, and they focused on digital marketing, as well as [on] human resources (HR) and finance. That was the Department of Tourism that did that. That was very helpful, and it opened my eyes, and it was good. It was a good workshop – I enjoyed it. (R16)

Pillay (2016) recommended that PPPs should be strengthened, to improve the required digital skills. As such, it can be concluded that the government has an opportunity to create enabling conditions for the adoption of digital technologies in the future. However, the current evidence suggest that the government has yet to exploit the opportunity fully, thereby limiting, as yet, the potential of micro-enterprises to adopt digital technologies. Nonetheless, owner-managers remain key actors of digitalisation and the government can only play a supporting role. The findings support other studies which found that the government had only a minor influence on SMMEs' decisions to adopt ICT (Gareeb & Naicker, 2015; Jere & Ngidi, 2020).

ICT infrastructure

The ICT infrastructure had created both enabling and limiting conditions for the adoption of digital technologies by the micro-enterprises interviewed. The study results indicate that the micro-enterprises concerned had access to quality telecommunications and internet infrastructure. Some businesses used fibre connections, while others had access to router connections. While South Africa's ICT infrastructure is good, especially in the urban areas where the present study was conducted, ongoing power cuts (loadshedding) disrupt the ICT infrastructure. A tour operator owner-manager explained:

> "The other big challenge is loadshedding. Ah, because if you run everything like I do, and there's loadshedding and there's no Wi-Fi, it's really difficult to run your business (R15).

As a result, the participants stressed that it was difficult to carry out online-based activities during loadshedding. The electricity crisis has exposed the vulnerabilities of fully digitalising an enterprise, particularly for micro-enterprises that have limited financial resources to deploy other sources of power such as solar energy.

Perceived ease of use

The study results indicate that PEOU enabled the micro-enterprises to adopt digital technologies. The PEOU was moderated by the level of technological skills of the owner-managers or employees concerned (Davis, 1989). For example, owner-managers who possessed website building and maintenance skills considered the process of uploading content on their website as easy. One tour operator owner-manager explained:

> What I basically did, I taught myself, or somebody taught me, how to use a simple website, which is working through WordPress. It's like working on Word, like the

> Word, say, WordPress. It's very easy to use, and it did help me save a lot of money when I was creating the website. (R19)

Furthermore, owner-managers who lacked the skills regarded the same process as difficult. Similarly, enterprises with the required skills considered digital marketing 'easy', whereas enterprises without the required skills considered it to be a complex process, particularly in relation to executing marketing campaigns and targeted marketing. A tour operator owner-manager explained:

> You find that, in [i.e. on] Facebook, I sometimes have challenges, like advertising the business, so it takes time for me to be able to post every day on Facebook and Instagram. (R7)

Most of the enterprises considered facilitating unconventional B2C e-commerce transactions as easy. This was because the tools used to facilitate payments such as mobile banking, internet banking and ATM deposits are common and friendly to use.

Perceived usefulness

PU was seen as an enabling condition for the adoption of digital technologies. For example, the popularity of email use was associated with such benefits as communication with internal staff, as well as with customers and suppliers. Similarly, the decision to build a website was also influenced by the potential benefits provided. One owner-manager emphasised the importance of having a website:

> Because I don't have a physical store like a travel agent shop, it was so important as my shop front. I use my website to display my products. The decision was, I had to have a website because I needed to tell people and show people visually, show them what we can offer and it's so important. The website is so important because all my clients are based overseas; it's important to have a website. It's the way that they assess the company. (R15)

The owner-managers interviewed perceive having a website as a way to legitimise their enterprise. Digital marketing was adopted for benefits such as building brand awareness, customer engagement, and sales leads.

The study results also indicate that PU does not only influences adoption but also the extent of use of digital technology. For example, many of the enterprises favoured developing a website without payment facilitation capabilities as they did not perceive it useful to accept payments on their website. Instead, facilitating payments through unconventional e-commerce was perceived as more useful. Other studies have also found that SMMEs adopt digital technologies when the benefits are easy to quantify (Ndayizigamiye & McArthur, 2014).

Security concerns

Conducting business digitally poses security challenges for both enterprises and consumers. The study results indicate that concerns regarding the legitimacy of digital tourism micro-enterprises acted as both a limiting and an enabling condition for the adoption of digital technologies. On the negative side, most owner-managers stressed that digitalising a tourism micro-enterprise came with the inbuilt risk of being perceived as a 'fly-by-night' enterprise. A tour operator owner-manager explained:

> I think, with a website, people will take you more seriously. That's the first point of contact, I guess, when people want to see if you are a legitimate company, and the first thing they do is Google you to see more about you, get reviews about you. (R16)

Therefore, in order to build a sense of legitimacy for customers, enterprises create a digital footprint by building reputable websites, creating social media pages, and maintaining good customer reviews. Sharma et al. (2020) also found that customers do not readily come to rely on travel enterprises that have only an online presence, due to the spiking fraud in digital markets. In conclusion, while security concerns may pose a risk for digitalising a micro tourism enterprise, they also encourage the adoption of certain digital technologies to address the same concerns.

COVID-19

The COVID-19 pandemic has had detrimental effects on livelihoods, particularly for enterprises in the tourism industry. However, on the brighter side, the study results indicate that the pandemic accelerated the efforts made by the micro-enterprise owner-managers to digitalise their enterprises. Virtual communication tools such as Zoom, Microsoft Teams, and WhatsApp were used to communicate, as opposed to meeting in person. Social media marketing was essential for sustaining the brand of the enterprises, until the travel restrictions eased, and the tourists could travel again. A tour operator owner-manager explained:

> COVID-19 definitely pushed [the] social media. I imagine the social media companies must have made an absolute fortune, in terms of new people using it. So, yeah, social media definitely was the big [thing] ... social media enabled our business to survive, definitely, over COVID. (R10)

Therefore, the findings demonstrate that COVID-19 actually spurred women-owned tourism micro-enterprises to embrace digital technologies. These findings are consistent with the report from the WEF (2021), which highlighted a global trend of increased utilisation of digital technologies by SMMEs since the onset of the COVID-19 pandemic.

Conclusion

This study provides evidence of the factors that create enabling or limiting conditions for the adoption of digital technologies by women-owned tourism micro-enterprises. The findings highlight that women-owned tourism micro-enterprises have embraced digital technologies such as email, websites, digital marketing, and e-commerce (both B2B and B2C). However, they have yet to explore advanced smart tourism technologies like LST. These results deviate from previous studies indicating that women-owned enterprises are likely to lag behind in digitalisation due to the gender digital divide (see Khumalo & Saurombe, 2022; Mariscal et al., 2019; Ojo & Segone, 2022). Despite encountering constraints in terms of financial resources and human capital skills, these micro-enterprises are actively pushing for the adoption of digital technologies. The study also revealed that resource limitations prevent the optimal utilisation of these digital technologies even after adoption. These findings support the notion that the gender digital divide has evolved beyond mere access to encompass actual usage and benefit (Acilar & Sæbø, 2019). We argue that it is crucial to contextualise these findings within the specific dynamics of the tourism sector. Compared to enterprises in other sectors, tourism enterprises, regardless of size, demonstrate a greater inclination towards adopting digital technologies due to their reliance on both domestic and international markets (Opute et al., 2020; Pencarelli, 2020).

The main contribution of the study is that the adoption of digital technologies by women-owned tourism micro-enterprises is a multifaceted and dynamic process. The TAM-TOE constructs identified in this study exert varying degrees of influence on these micro-enterprises. Thus women-owned micro-enterprises are more likely to adopt digital technologies

that they perceive as compatible with their business operations. Moreover, quantifying the benefits of adopting such technologies in terms of enhanced business efficiency and sales is essential. Enterprises with greater financial resources and human capital skills are better positioned to adopt and derive benefits from digital technologies. Conversely, enterprises lacking these resources may still adopt digital technologies but may struggle to utilise them optimally for their advantage. Therefore, this study recommends providing support through training and upskilling initiatives for those lacking the necessary capabilities. Additionally, micro-enterprises should be financially empowered through grants and loans to invest in human capital skills.

It is important to acknowledge the limitations of this study, including the use of a qualitative approach and a small sample size. Consequently, the findings may not be generalisable to the entire population of women entrepreneurs in the tourism industry. Future studies should consider employing a quantitative approach with a larger sample, exploring other sectors within the tourism industry, conducting comparative studies between male and female-owned enterprises, and broadening the scope to gain a more comprehensive understanding of technology adoption in the tourism industry.

Acknowledgement
This paper is developed based on a postgraduate thesis submitted at the University of Johannesburg. The support from the National Research Foundation is acknowledged.

References

Abou-Shouk, M.A., Lim, W.M. & Megicks, P. (2016). Using Competing Models to Evaluate the Role of Environmental Pressures in Ecommerce Adoption by Small and Medium Sized Travel Agents in a Developing Country. *Tourism Management*, 52327-52339.

Acilar, A. & Sæbø, Ø. (2023). Towards Understanding the Gender Digital Divide: A Systematic Literature Review. *Global Knowledge, Memory and Communication*, 72(3), 233-249

Aghaei, S., Nematbakhsh, M. & Farsani, H. (2012). Evolution of the World Wide Web: From Web 1.0 to Web 4.0. *International Journal of Web & Semantic Technology*, 3(1), 1-10.

Ajibade, P. (2018). Technology Acceptance Model Limitations and Criticism: Exploring the Practical Applications and Use in Technology-related Studies, Mixed-methods, and Qualitative Researches. *Library Philosophy and Practice*, 1941.

Alshammari, S.H. & Rosli, M.S. (2020). A Review of Technology Acceptance Models and Theories. *Innovative Teaching and Learning Journal*, 4(2), 12-22.

Awa, H.O., Ukoha, O. & Emecheta, B.C. (2012). Integrating TAM, TPB and TOE Frameworks and Expanding Their Characteristic Constructs for E-Commerce Adoption by SMEs. *Journal of Science & Technology Policy Management*, 6(1), 76-94.

Azmadi, A., Abd Hamid, M., Hanafiah, M. (2022). Rise of the QR Code Application Adoption: Towards a Conceptual Post-Covid-19 Smart Sustainable Tourism Framework. *International Journal of Social Science Research*, 4(1), 478-488.

Bagozzi, R. (2007). The Legacy of The Technology Acceptance Model and a Proposal for a Paradigm Shift. *Journal of the Association for Information Systems*, 8(4), 244-254.

Bellakhal, R. & Mouelhi, R.B.A. (2020). *Digitalisation and Firm Performance: Evidence from Tunisian SMEs.* The European Union–Mediterranean and African Network for Economic Studies (EMNES). Working Paper no. 36.

Bhorat, H., Asmal, Z., Lilenstein, K. & Van der Zee, K. (2018). *SMMEs in South Africa: Understanding the Constraints on Growth and Performance*. Development Policy Research Unit. Working Paper, 1-52.

Buhalis, D. (1998). Strategic Use of Information Technologies in the Tourism Industry. *Tourism Management*, 19(5), 409-421.

Buhalis, D. (2003). *eTourism: Information Technology for Strategic Tourism Management*. London: Pearson.

Buhalis, D. & Law, R. (2008). Progress in Information Technology and Tourism Management: 20 Years on and 10 Years After the Internet – The State of Etourism Research. *Tourism Management*, 29(4), 609-623.

Bvuma, S. & Marnewick, C. (2020). An Information and Communication Technology Adoption Framework for Small, Medium and Micro-Enterprises Operating in Townships South Africa. *Southern African Journal of Entrepreneurship and Small Business Management*, 12(1), 8-12.

Cant, M.C., Wiid, J.A. & Hung, Y. (2016). Internet-based ICT Usage by South African SMEs: The Barriers Faced by SMEs. *Journal of Applied Business Research (JABR)*, 32(6), 1877-1888.

Chamboko-Mpotaringa, M. & Tichaawa, T.M. (2021a). Tourism Digital Marketing Tools and Views on Future Trends: A Systematic Review of Literature. *African Journal of Hospitality, Tourism and Leisure*, 10(1), 712-726

Chamboko-Mpotaringa, M. & Tichaawa, T.M. (2021b). Digital Trends and Tools Driving Change in Marketing Free State Tourism Destinations: A Stakeholder's Perspective. *African Journal of Hospitality, Tourism and Leisure*, 10(6), 1973-1974.

Ciurea, J., Dinu, L. & Dinu, G. (2021). The Influence of Digitalisation on SMEs. University *Annals, Economic Sciences Series*, 21(1), 490-495.

Criscuolo, C., Gal, P, N. & Menon, C. (2017). Do Micro Start-ups Fuel Job Creation? Cross Country Evidence from the DynEmp Express Database. *Small Business Economics*, 48, 393-412.

Davis, F.D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-340.

El-Gohary, H. (2012). Factors Affecting E-Marketing Adoption and Implementation in Tourism Firms: An Empirical Investigation of Egyptian Small Tourism Organisations. *Tourism Management*, 33(5), 1256-1269.

Endris, E. & Kassegn, A. (2022). The Role of Micro, Small and Medium Enterprises (Msmes) to the Sustainable Development of Sub-Saharan Africa and its Challenges: A Systematic Review of Evidence from Ethiopia. *Journal of innovation and Entrepreneurship*, 11(1), 1-18.

Fosu, A. (2018). The Use of ICT by SMMEs in a Digital Economy: A Case Study in Buffalo City Metropolitan in South Africa. *International Journal of Community Development & Management Studies*, 2, 159-168.

Freeme, D. & Gumede, P. (2012*). Determining the Maturity Level of e-commerce in South African SMEs*. In the European Conference on Information Systems Management held in Barcelona on the 11th-13th June 2012. Academic Conferences International Limited.

Gangwar, H., Date, H. & Raoot, A.D. (2014). Review on IT Adoption: Insights from Recent Technologies. *Journal of Enterprise Information Management*, 27(4), 488-502.

Gareeb, P.P. & Naicker, V. (2015). Determinants for South African SMEs to Adopt Broadband Internet Technologies. *Electronic Journal of Information Systems in Developing Countries*, 68(1), 1-24.

Gherhes, C., Williams, N., Vorley, T. & Vasconcelos, A.C. (2016). Distinguishing Micro-Businesses from SMEs: A Systematic Review of Growth Constraints. *Journal of Small Business and Enterprise Development*, 24(4), 939-963.

Ghobakhloo, M., Arias-Aranda, D. & Benitez-Amado, J. (2011). Adoption of E-commerce Applications in SMEs. *Industrial Management & Data Systems*, 111(8), 1238-1269.

Gono, S., Harindranath, G. & Özcan, G.B. (2016). The Adoption and Impact of ICT in South African SMEs. *Strategic Change*, 25(6), 717-734.

Greenbank, P. (2000). Micro-business Start-ups: Challenging Normative Decision Making? *Marketing Intelligence & Planning*, 18(4), 206-212.

Guci, D.A. & Ghazali, P.L. (2019). *Woman Micro-enterprise in Batam*. Penerbit: Yayasan Kita Menulis.

Hall, C.M., Scott, D. & Gössling, S. (2020). Pandemics, Transformations and Tourism: Be Careful What You Wish For. *Tourism Geographies*, 22(3), 577-598

Hassan, B.H., Chin, S.T., Yeow, J.A. & Rom, N.A. (2011). *Financial Constraints and Opportunities of Micro Enterprise Entrepreneurs: A Theoretical Framework*. International Conference on Business and Economics, held in Lumpur, Malaysia. Jurong West, Singapore: IACSIT Press.

Henama, U. & Apleni, L. (2020). The Effect of E-commerce Travel Agencies in East London, South Africa. *African Journal of Hospitality, Tourism and Leisure*, 9(1), 1-14.

Herrington, M., Kew, P., & Mwanga, A. (2017). *The Global Entrepreneur Monitor (GEM), South African Report 2016/2017*. Can Small Businesses Survive in South Africa?

Idris, A., Edwards, H. & McDonald, S. (2017). *E-commerce Adoption in Developing Countries SMEs: What Do the Prevailing Theoretical Models Offer us*? 4th International Conference on e-Commerce (ICoEC 2017), held in Putrajaya, Malaysia.

Inan, G.G. & Bititci, U.S. (2015). Understanding Organizational Capabilities and Dynamic Capabilities in the Context of Micro-Enterprises: A Research Agenda. *Procedia – Social and Behavioral Sciences*, 210310-210319.

International Finance Corporation (IFC). (2018). *The Unseen Sector: A Report on the MSME Opportunity in South Africa*. Washington: IFC.

Jaouen, A. & Lasch, F. (2015). A New Typology of Micro-Firm Owner–Managers. *International Small Business Journal*, 33(4), 397-421.

Jere, J.N. & Ngidi, N. (2020). A Technology, Organisation and Environment Framework Analysis of Information and Communication Technology Adoption by Small and

Medium Enterprises in Pietermaritzburg. *South African Journal of Information Management*, 22(1), 1-9.

Lebambo, M.M. (2014). *The Adoption of The Internet as an Advertising Medium by Bed and Breakfast Establishments in Bushbuckridge*. Unpublished Master's Dissertation, Tshwane University of Technology, Pretoria.

Lim, Y.J., Osman, A., Salahuddin, S.N., Romle, A.R. & Abdullah, S. (2016). Factors Influencing Online Shopping Behavior: The Mediating Role of Purchase Intention. *Procedia Economics and Finance*, 35(2016), 35401-35410.

Mariscal, J., Mayne, G., Aneja, U. & Sorgner, A. (2019). Bridging the Gender Digital Gap. *Economics*, 13(1).

Marnewick, C. (2014). Information and Communications Technology Adoption Amongst Township Micro and Small Business: The Case of Soweto. *South African Journal of Information Management*, 16(1), 1-12.

Matikiti, R., Mpinganjira, M. & Roberts-Lombard, M. (2018). Application of the Technology Acceptance Model and the Technology–Organisation–Environment Model to Examine Social Media Marketing Use in The South African Tourism Industry. *South African Journal of Information Management*, 20(1), 1-12.

Mbatha, B. & Ngwenya, B. (2018). Obstacles to the Adoption of E-Commerce by Tourism SME Service Providers in South Africa: The Case of Selected SMEs in Pretoria. African *Journal of Business and Economic Research*, 13(3), 153-173.

Mohanty, P., Hassan, A. & Ekis, E. (2020). Augmented Reality for Relaunching Tourism Post-COVID-19: Socially Distant, Virtually Connected. *Worldwide Hospitality and Tourism Themes*, 12(6), 753-760.

Ndayizigamiye, P. & Khoase, R.G. (2018). Inhibitors of the Adoption of E-Commerce by SMMEs in Two South African Cities. *International Journal of ebusiness and egovernment Studies*, 10(1), 51-66.

Ndayizigamiye, P. & McArthur, B. (2014). Determinants of E-Commerce Adoption Amongst SMMES in Durban, South Africa. *Mediterranean Journal of Social Sciences*, 5(25), 250-256.

Ntanjana, A. & Mangwane, J. (2019). *Women in Tourism Entrepreneurship in South Africa: Is it a man's world?* In Advances in Tourism, Technology and Smart Systems: Proceedings of ICOTTS 2019, pp.335-344. Berlin: Springer.

Ojo, T. A. & Segone, K. (2022, March 7). *Opinionista: Women are being Squeezed out of the Digital Economy*. Daily Maverick. Available at https://www.dailymaverick.co.za/opinionista/2022-03-07-women-are-being-squeezed-out-of-the-digital-economy/ [Retrieved 15 November 2022].

Opute, A.P., Irene, B.O. & Iwu, C.G. (2020). Tourism Service and Digital Technologies: A Value Creation Perspective. *African Journal of Hospitality, Tourism and Leisure*, 9(2), 1-18.

Organisation for Economic Co-operation and Development (OECD). (2013). *Entrepreneurship at a Glance*. Paris: OECD.

Organisation for Economic Co-operation and Development (OECD). (2021). *SME and Entrepreneurship Outlook*. Paris: OECD.

Orkoh, E. & Viviers, W. (2021). Gender Composition of Ownership and Management of Firms and the Gender Digital Divide in Africa. *South African Journal of Business Management*, 52(1), 1-14.

Osman, M.A., Malanga, D.F. & Chigona, W. (2019). Realities of Microenterprises' ICT Use for Business Activities and for Acquiring Online Government Support: A study in Western Cape Province, South Africa. *African Journal of Information and Communication*, 24, 1-23.

Paraskevas, A., Katsogridakis, I., Law, R. & Buhalis, D. (2011). Search Engine Marketing: Transforming Search Engines into Hotel Distribution Channels. *Cornell Hospitality Quarterly*, 52(2), 200-208.

Peeters, P. & Weston, R. (2015). *Research for the TRAN Committee – the Digitalisation of Tourism Enterprises*. Brussels: European Union.

Pencarelli, T. (2020). The Digital Revolution in the Travel and Tourism Industry. *Information Technology & Tourism*, 22: 445-476.

Pfister, P. & Lehmann, C. (2021). Returns on Digitisation in SMEs – A Systematic Literature Review. *Journal of Small Business & Entrepreneurship*. DOI: 10.1080/08276331.2021.1980580

Pillay, P. (2016*). Barriers to Information and Communication Technology (ICT) Adoption and Use amongst SMEs: A Study of the South African Manufacturing Sector*. Research Report. Braamfontein: Wits Business School.

Rashid, A. T. (2016). Digital inclusion and Social Inequality: Gender Differences in ICT Access and Use in Five Developing Countries. *Gender, Technology and Development*, 20(3), 306-332.

Sarkady, D., Neuburger, L. & Egger, R. (2021). *Virtual Reality as a Travel Substitution Tool During COVID-19 Information and Communication Technologies in Tourism 2021*. Proceedings of the ENTER 2021 eTourism Conference Held Virtually, January 19–22, 2021. Cham: Springer.

Schiopu, A.F., Hornoiu, R.I., Padurean, M.A. & Nica, A. (2021). Virus Tinged? Exploring the Facets of Virtual Reality Use in Tourism as a Result of the COVID-19 Pandemic. *Telematics and Informatics*, 60, 1-20.

Sharma, A., Sharma, S. & Chaudhary, M. (2020). Are Small Travel Agencies Ready for Digital Marketing? Views of Travel Agency Managers. *Tourism Management*, 79, 1-10.

Starbuck, W.H. (1976). *Organizations and their Environments*. In Handbook of Industrial and Organizational Psychology, pp.1069-1124. Chicago: Rand McNally.

Tichaawa, T.M., Mhlanga, O. & Sicwebu, S. (2017). The Impact of Information Communication Technologies (ICTs) on Tourism Businesses in East London, South Africa. *Acta Universitatis Danubius. Œconomica*, 13(3), 19-29

Tornatzky, L.G., & Fleischer, M. (1990). *The Process of Technological Innovation*. Lexington, MA: Lexington Books.

Tripopsakul, S. (2018). Entrepreneurial Perceptions and Intentions: The Comparative Study Between Poland and Thailand. *Polish Journal of Management Studies*, 17(1), 249-259.

Tumiwa, J. & Nagy, A. (2021). Micro, Small, and Medium Enterprises in Emerging Economies and Economic Transition: A Comparative Study between Indonesia and Hungary. International *Journal of Entrepreneurship and Small Business*, 43(1), 22-38.

United Nations Development Programme South Africa (UNDP SA). (2020). *Impact of COVID-10 on Micro and Informal Businesses*. South Africa, Pretoria: UNDP.

Valeri, M. & Katsoni, V. (2021). *Gender and Tourism: Challenges and Entrepreneurial Opportunities*. Emerald Group Publishing.

Vollstedt, M. & Rezat, S. (2019). An Introduction to Grounded Theory with a Special Focus on Axial Coding and the Coding Paradigm. *Compendium for Early Career Researchers In Mathematics Education*, 13(1), 81-100.

Wang, Y., Li, H., Li, C. & Zhang, D. (2016). Factors Affecting Hotels' Adoption of Mobile Reservation Systems: A Technology–Organization–Environment Framework. *Tourism Management*, (1982), 53163-53172.

World Economic Forum (WEF). (2021). *COVID-19 and Technology Adoption in Small and Medium-Sized Enterprises: The Impact and the way Forward*. Cologny: WEF

Xiang, Z., Wober, K. & Fesenmaier, D. (2008). Representation On-line Tourism Domain in Search Engine. *Journal of Travel Research*, 47(2), 137-150.