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# Opportunities and challenges of digital competencies for women tourism entrepreneurs in Latin America: a gendered perspective

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## ABSTRACT

While increasingly more economic and social exchanges are taking place in the digital environment globally, women entrepreneurs' access to, and adoption of, digital platforms cannot be assumed to happen naturally due to gender and social inequalities that are being replicated in the online environment. This study investigates the opportunities and challenges of entrepreneurial digital competencies for women tourism entrepreneurs (WTEs) in Latin America from a gendered perspective. A total of 33 interviews were conducted with women tourism entrepreneurs in Mexico and Ecuador. The findings reveal that women tourism entrepreneurs can and have been empowered through utilising digital technologies and digital platforms, but they face significant challenges and barriers, including the lack of digital competencies; lack of access to digital devices, infrastructure, and training; reliance on supporting staff and family members; and concerns around safety, security and work-life balance. This study contributes to existing entrepreneurship literature by identifying the social and structural inequalities that impede growth in women's tourism business. The findings also highlight how women are disadvantaged in gaining digital competencies because of the macro gender digital divide and micro-level factors. Implications for women's entrepreneurship policy development in relation to digital competencies are provided.

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## Introduction

Female entrepreneurs play a significant role in tourism, an industry characterised by a female-dominated workforce (UNWTO, 2019). Entrepreneurship has empowered women in tourism in multiple ways through the provision of jobs, income, and financial independence. In return, these empowered women provide society with employment and contribute directly to products and services pertinent to tourism development (UNWTO & UN Women, 2010). Given the significance of women tourism entrepreneurs (WTEs), a growing body of literature has emerged to

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investigate the motivation and barrier (Costa et al., 2016), empowerment (Moswete & Lacey, 2015; Panta & Thapa, 2018), and impact (Kimbu & Ngoasong, 2016) of WTEs as well as their entrepreneurial orientation, business performance and network (Kimbu et al., 2019; Ribeiro et al., 2021). While the tourism industry is undergoing a massive digital transformation that continues to revolutionise business practices (Dredge et al., 2019), limited research has investigated WTEs and their adoption of digital technology. Figueroa-Domecq et al. (2020) is one of the few exceptions that has examined WTEs' technological capabilities and their perception of the usefulness and barriers to technology adoption. Other authors have examined how WTEs encounter digitalisation, acquire digital skills and collaborate on digital networks with a focus on the Swedish context (Bernhard & Olsson, 2020; Olsson & Bernhard, 2021). Apart from these three specific studies, crucial knowledge gaps remain about WTEs and their digital competencies.

Existing literature suggests that women entrepreneurs generally lag behind in terms of entrepreneurial digital competencies, online marketing, and product and brand development (Figueroa-Domecq et al., 2020; Kamberidou, 2020). Compared to males, female entrepreneurs are more likely to experience a greater sense of vulnerability relating to online sexual harassment and privacy concerns when engaging in the digital economy (Michota, 2013). Furthermore, there is a lack of social policy addressing the digital access and digital competency gaps among women entrepreneurs in developing countries (Kamberidou, 2020). So, while more economic and social exchanges are taking place in the digital environment globally, women entrepreneurs' access to, and adoption of, digital platforms cannot be assumed to happen naturally and warrants further investigation. Until now, our understanding of opportunities and challenges of digital competencies for WTEs remain stunted.

Addressing these significant knowledge gaps in digital competencies for women tourism entrepreneurs, this study aims to lay the groundwork for further development of tourism entrepreneurship literature from a gender perspective. It does so by investigating the opportunities and challenges faced by WTEs in using digital platforms to improve their business performance, with an aim to narrow the gender digital divide. The outcomes of this study are expected to provide a nuanced and systematically mapped understanding of WTEs' points of view and needs, taking into account the intersection of gender and structural, socio-cultural and individual factors that shape these women's digital access and competencies. Although COVID-19 brought international travel and tourism to a hiatus in 2020, it has also accelerated the ease, speed, and adoption of doing business in the digital space. Therefore, insights from this study are timely, particularly when there have been calls for tourism recovery policies and measures to be gender-sensitive and inclusive (UNWTO, 2021).

The paper begins by reviewing the extant literature on women entrepreneurs that informs the study. It turns next to critically examine entrepreneurial digital competencies scholarship from a gender perspective. Thereafter, the research design is outlined, followed by the findings. The theoretical discussion, practical implications and limitations are presented in the Discussion section. The final section summarises the conclusion and key value of the study.

## Literature review

### *Women (tourism) entrepreneurs*

Despite the growing presence of female entrepreneurs, the dominant discourse and practice of entrepreneurship remain highly masculine (Figueroa-Domecq et al., 2020). Perpetuated by academic research on, and media representations of the entrepreneur, entrepreneurial femininities have been rendered invisible. This may explain why women's businesses tend to be depicted as smaller, less profitable, and experiencing slower growth (Halabisky, 2018) and women entrepreneurs tend to be seen as less competent in converting digital and network advantages into business advantages (Chen et al., 2015).

Gender differences in entrepreneurship can be broadly summarised into five categories, namely, education, experience, network, access to capital, and culture (Henry et al., 2017). Studies have shown that WTEs are lacking in business knowledge and skills (Panta & Thapa, 2018), limited in their access to collateral and financial resources to start and grow their businesses (Moswete & Lacey, 2015; Ngoasong & Kimbu, 2019), and in need of collaborative networks (Kimbu et al., 2019). Psychological barriers such as lack of confidence and self-efficacy could also impede women's progress in growing their tourism businesses (Hallak et al., 2015). These barriers arise directly or indirectly from the institutional and sociocultural context that perpetuates gender discrimination (Brush et al., 2009; Panta & Thapa, 2018).

Culture further determines the social and structural impediments faced by WTEs. In some cultures, women entrepreneurs' interactions with male customers are scrutinised and viewed unfavourably by the community (Panta & Thapa, 2018). In other cultures, women continue to take on more household responsibilities than men (Olsson & Bernhard, 2021), and many opt to adopt lifestyle instead of growth-oriented businesses to balance work and family needs (Henry et al., 2017). This is particularly true for WTEs whose cultures and communities support entrenched gender stereotyping meaning that the boundaries between their tourism businesses (such as cooking, cleaning, and serving) and domestic tasks are often blurred. The tension from trying to balance the conflicting needs arising from these double roles is evidenced for example, in Nepalese women who faced a heightened expectation of them being able to fulfil their domestic and childcare duties alongside running tourism businesses (Panta & Thapa, 2018); in Indian women who do not challenge but undertake their gendered domestic roles in addition to their tourism work (Caparrós, 2018); and in Mexican WTEs who are vulnerable under their *Machismo* culture (Suárez, 2018). In countries where patriarchal culture prevails such as Rwanda, India, Pakistan, and South Africa, empirical evidence shows that female entrepreneurship is typically discouraged or limited unless the entrepreneurial (tourism) activities resemble those of domestic responsibilities (Kamberidou, 2020).

Women-focused entrepreneurship policies play an important role in enabling women, increasing the number of start-ups, and supporting the growth of businesses owned by women (Halabisky, 2018; Henry et al., 2017; Piacentini, 2013). Some examples of government interventions for women entrepreneurs include raising awareness of entrepreneurial opportunities, providing skills and information, facilitating access to capital and network, and increasing the provision of affordable child and elderly care services (Halabisky, 2018; Henry et al., 2017; Piacentini, 2013). However, these policies and interventions are uncommon and only available in few countries. Henry et al. (2017) compared women entrepreneurship policies in 13 countries and identified significant gaps between policies and actual practices, and between advanced economies in the West and the rest of the world. Existing policy responses for women entrepreneurs are often reduced to generic statements on the importance of equal opportunities, lacking clear targets, strong policy commitments, and consultation mechanisms (Piacentini, 2013). Furthermore, existing gender-focused entrepreneurship policies have predominantly focused on individual challenges, few have addressed cultural and normative challenges and provided institutional interventions (Henry et al., 2017). Likewise, women's entrepreneurship policies are often separated from core economic policy and reduced to women's welfare issues; these policies continue to perpetuate women's secondary position in business and society (Ahl & Nelson, 2015).

Thus far, the literature on women entrepreneurs is replete with obstacles women face in business settings such as social and cultural gender expectations, lack of resources and government support, and psychological barriers. These obstacles have limited women entrepreneurs' access to human (e.g. education and training), social (e.g. network), and financial capital (Henry et al., 2017), but it is thought that entrepreneurial digital competencies may to some extent, counteract these obstacles.

## ***Entrepreneurial digital competencies and gender***

### ***Entrepreneurial digital competencies***

Digital entrepreneurship is defined as the practice of pursuing entrepreneurial opportunities presented by digital technologies (Davidson & Vaast, 2010). This includes creating and performing key business activities such as marketing, distribution, and managing stakeholder relationships using digital technologies (Hair et al., 2012). Central to digital entrepreneurship is entrepreneurial digital competencies (EDCs), which are the combination of traditional entrepreneurial competencies and digital competencies (Ngoasong, 2018). Digital competencies (DCs) comprise five areas of competencies associated with information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving (Carretero et al., 2017). Apart from knowledge and skills, the antecedents of DCs include individual characteristics such as attitude, personality, motivation, interest, prior experiences, and level of education (Oberländer et al., 2020) and structural factors (e.g. industry context, digital infrastructure, government policies etc.) (Ngoasong, 2018). The outcomes of EDCs include entry and post-entry strategic decision making (Ngoasong, 2018) and a distributed and diffused entrepreneurial agency (Zaheer et al., 2019).

Digital entrepreneurship has the potential to act as a great leveller to equalise the entrepreneurial playing field in emerging economies for women constrained by social and cultural practices (McAdam et al., 2020). For instance, McAdam et al. (2020) found that digital entrepreneurship enables the emancipation and cyberfeminism for women in Saudi Arabia by providing them with a virtual world where they can escape from the gender restrictions that are placed on them in the real world. Digital competencies empower women globally to earn an income while attending to unpaid household responsibilities. Given their ability to drive the local economy, many women-owned home-based entrepreneurial activities are often encouraged by local and state governments and fuelled by online sharing economy platforms such as Airbnb (UNWTO, 2019). According to Airbnb's report, women entrepreneurs made up 54% of the global host community (Airbnb, 2020). These digital peer-to-peer accommodation platforms provide entrepreneurship opportunities for WTEs in developing countries that would otherwise not exist (Lim & Bouchon, 2021).

### ***Gender digital divide***

While it is pre-emptively hopeful that digital competencies may redress some gender issues in tourism entrepreneurship and unlock access to certain resources for women, prior research has highlighted the gender and social gaps in EDCs (Dy et al., 2017; Ngoasong, 2018). Some scholars have questioned the extent of the effect of digital entrepreneurship as a gender equality leveller, considering that gender and social inequalities are being replicated in online environments (Dy et al., 2017). For instance, worldwide data show that women have a lower level of engagement with the internet and perform a narrower range of online activities compared to men (Alliance for Affordable Internet, 2021; Haight et al., 2014). Beyer (2014) had already established the underrepresentation of women in Computer Science and more recently, Fractenberg & Kaner (2022) posited that the gender gap in computer science research as a well-studied problem, with an estimated ratio of 15%–30% female researchers. Within the tourism industry, women have limited participation in decision-making positions in high-tech tourism organisations (Figueroa-Domecq et al., 2020). Among tourism entrepreneurs, women are found to have underestimated their digital competencies (Figueroa-Domecq et al., 2020). Limited resources, a constant need for new digital skills and digital burnout are some challenges WTEs reported when operating their tourism businesses in the increasingly digitalised environment (Olsson & Bernhard, 2021).

The gender digital divide or gender technology gap could be explained by the social construction of technology theory, which suggests that social context, including gender, shapes

the construction, meaning and usage of technology (Pinch & Bijker, 1984). As such, computer software and digital tools are often developed for and by men, which could explain why women are psychologically more reserved and develop less interest and confidence in using digital technologies compared to men (Rajahonka & Villman, 2019). The gender digital divide is further compounded by geography and income. For instance, women who have a lower income and who live in rural areas in the least developed countries are more likely to be excluded from the digital economy (Alliance for Affordable Internet, 2021). This phenomenon of the gender and social digital divide manifests the social-material nature of digital technologies and can be attributed to a lack of digital literacy skills, quality education, and telecommunication infrastructure in developing and least developed countries and among marginalised groups (Dadajonova et al., 2021; Dredge et al., 2019; Zaheer et al., 2019). In places where infrastructure exists, the issues of affordability (Alliance for Affordable Internet, 2021), balancing work and domestic responsibility (Olsson & Bernhard, 2021; Rajahonka & Villman, 2019), sociocultural norms (Intel, 2012), and cyber harassment (Michota, 2013) are some other gender and social barriers that constrain women from fully capitalising the opportunities offered by digital technologies. As informed by the literature, all these aspects (as encapsulated in Figure 1 as the formative framework for this study) could hinder women entrepreneurs' uptake of the latest digital technology to grow their businesses, which in turn impede the establishment of strategic networks and entry to new markets.

While G20 economies have already actioned to narrow the gender digital divide, more social policy work needs to be done, particularly at the micro level, to counter existing sociocultural norms that curtail women's ability to benefit from developing their digital competencies, and subsequently, the entrepreneurship opportunities offered by the digital transformation (Dy et al., 2017). Ngoasong (2018) highlighted the importance of social policy interventions in developing digital infrastructure and education and training opportunities for entrepreneurs. Despite this, there are few formal social policies in place that directly respond to enabling WTE's digital competencies. Further, mainstream entrepreneurship training programmes tend to assume a gender-neutral approach, overlooking the needs of women entrepreneurs who have different

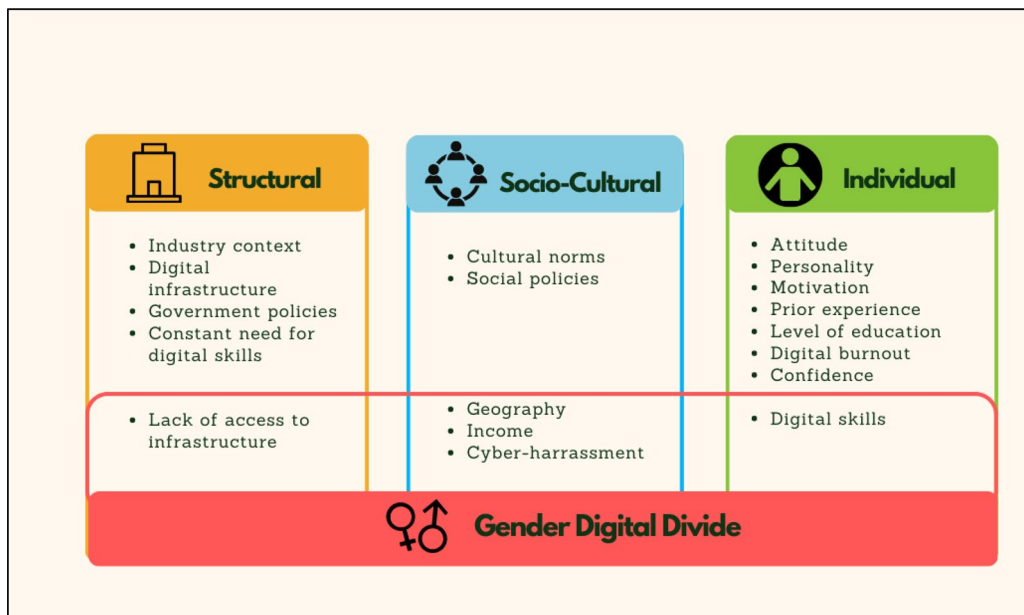


Figure 1. Key factors influencing Women Tourism Entrepreneurs' Digital Competencies. Informed by Research Findings.

entrepreneurial and digital experiences from men (Halabisky, 2018). Prior research has called for more research on diversity, inclusivity, and sustainability of digital entrepreneurship and underlines the importance of public-private collaboration in clarifying the societal and individual effects of digital entrepreneurship and its outcomes (Zaheer et al., 2019). This study, therefore, aims to explore and identify the opportunities and challenges faced by WTEs in using digital platforms to promote their tourism businesses.

## Research design

### Research context

This study is concerned with the complex interplay between structural, sociocultural and individual factors, combined with gender digital divide that women tourism entrepreneurs face in their efforts to gain digital competencies to accelerate their businesses. This research was conducted in Ecuador and Mexico, which are within the geographical criterion - Latin America - specified by the governing body that funded the study. According to Global Entrepreneurship Monitor (2022), the region has the highest women-men ratio in early entrepreneurship participation in the world, with a percentage of 24.1% of women, and 30.4% of men in working-age population, who are either in the process of starting a new business or have early-stage business activity. The two countries chosen are relevant for the study since Ecuador has the highest women's early entrepreneurship participation rate (30.6%) in Latin America (Global Entrepreneurship Monitor, 2018). In Ecuador, women account for 46.5% of the entrepreneurial activity (Lasio et al., 2020), while Mexico is the only Latin American country that has more female entrepreneurs than males, as 51% of the entrepreneurs are women (Cucagna et al., 2020).

Women entrepreneurs in Latin America provide tourism employment for their communities and contribute directly to products and services pertinent to the tourism development in this region (UNWTO & UN Women, 2010), but the fact remains that few women sustain their businesses into maturity (Henry et al., 2017). Women entrepreneurs in Latin America often struggle with unprofitability and have lower growth expectations than women in other regions, and men in general (Global Entrepreneurship Monitor, 2018). This may be due to detrimental factors that affect the sustainability of women's entrepreneurial ventures such as the *Machismo* culture that values women staying at home raising children and doing chores (gender stereotypes and sociocultural norms), as well as women's fear of the lack of physical and financial safety when running businesses (Suárez, 2018; Terjesen & Amorós, 2010). For example, while Mexico ranks high on female entrepreneurial activities, gender stereotypes influence the sectors in which women operate, which might be less profitable (Cucagna et al., 2020). Similarly, in Ecuador, more men (52.93%) than women (49.99%) perceived opportunities to be an entrepreneur. Also, more men (76.56%) consider they have the skills to start a business than women (69.68%), and fear of failure constitutes a barrier to starting a business for women (38.54%) in greater proportions than men (30.91%) (Lasio et al., 2020).

In relation to technology adoption, Ecuador has 87.77 mobile phone subscriptions for every 100 people, and Mexico has 95.32 mobile phone subscriptions for every 100 people (Ritchie & Roser, 2020). According to the World Bank (2020), 65% of the population in Ecuador, and 72% of the population in Mexico use the internet, both above the average of 60% of the world population. In Mexico, 50.8% of internet users are women, compared to 49.2% of men. However, age and geographical location enhance the digital divide. Men aged between 18 and 34 constitute the largest proportion of internet users (85% of people in this group use the internet), while women above 55 years are the group with fewer internet users. Also, 86% of internet users in Mexico are located in urban areas (Failure Institute, 2018). Similarly, a report published by Freedom of the Web (Shahbaz et al., 2022) indicates that Ecuador has a significant divide

in internet access between urban (46.6%) and rural households (16.1%). Digital illiteracy is greater in rural areas (19.0%) than in urban areas (7.2%) and it is also greater among women (11.7%) compared to men (9.6%).

### **Data collection and analysis**

A qualitative approach underpinned by an interpretivist paradigm was used in this study to capture the participants' realities (Creswell & Poth, 2016). To identify women entrepreneurs in tourism-concentrated destinations of the two countries, women-led tourism businesses, associations, government offices, and a local university were approached. The participants were recruited through organisations such as *Women for Women Ecuador*, *Asociación de mujeres de Ayangue*, *Asociación de mujeres artesanas de Dos Mangas in Ecuador*, *Convivencia Femenina Turística*, *Tourism Secretariat of San Luis Potosí*, and *Instituto Tecnológico de San Luis Potosí in Mexico*. A total of 33 semi-structured interviews were conducted: 18 in Mexico and 15 in Ecuador. The participants owned a wide range of tourism businesses, including travel agencies, transportation and visa services, tours, accommodation, restaurants, handicrafts, and training and consultancy. The youngest participants were 33 (Ecuador) and 22 (Mexico) while the oldest was 62 (both in Ecuador and Mexico). [Table 1](#) presents the profiles of the participants.

The interviews were conducted in Spanish between August and October 2019. Most interviews were conducted face-to-face except for five women who were interviewed through a voice instant messaging application (WhatsApp) to overcome physical distance. WhatsApp was chosen because participants were familiar with the technology and had the app already downloaded to their devices (Gibson, 2022). Open-ended questions were designed to allow participants to express their perceptions, thoughts, feelings, and opinions (Creswell & Poth, 2016) about the challenges and opportunities women faced and their needs in relation to digital competencies. These questions were related to (1) the participants' experience of being a female tourism entrepreneur; (2) perception of digital platforms in general; (3) opportunities of using digital platforms in their businesses; and (4) challenges in relation to the use of digital platforms and digital competencies. The interview script was guided by the four key factors in [Figure 1](#) generated from the literature reviewed, with probes to allow other themes to emerge during the conversation. An example question for the key structural factor is, "What can you tell me about your experience in training for digital competencies?" and a probe that follows this question on key structural factor is, "How can the government or training agencies improve your digital competencies?" Emergent themes were explored, and follow-up questions were asked according to what was perceived as important for the participant. Demographic data were also collected including age, business types, years of entrepreneurial experience, and marital status. The interviews lasted between 20–60 minutes and were voice recorded. The interviews were transcribed verbatim in Spanish to keep the nuances in the meaning in the original language. The data were then translated into English for analysis by one of the co-authors who is fluent in both languages. The translation was validated by two bilingual authors.

Thematic analysis was applied to identify themes and patterns presented in the data. MAXQDA, a coding software, was used to analyse qualitative texts and organise coding systematically. Line-by-line initial coding was performed inductively to identify the challenges and opportunities faced by the participants in their encounters with digital platforms. The emerging concepts were characterised according to the following themes: opportunities, challenges, and underlying social, cultural, and psychological influences. The 33 interview transcripts were organised into 2 groups - Ecuador and Mexico. Preliminary thoughts, comments and interesting remarks related to the research questions were noted as memos to be shared amongst the authors for the coded segment. Then, each interview transcript was examined and recorded for similarities and differences with previously coded material relating to the four factors (structural, socio-cultural, individual, and gender digital divide) in [Figure 1](#).



Table 1. Participants' profiles.

Participant code	Age	Marital status	No. of children	Country	Area	Business type	No. of employees	Digital experience	Digital platforms	Equipment	Main purposes of using digital platforms
AY	50	married	2	Ecuador	rural	accommodation	–	beginner	WhatsApp, Facebook	smartphone	Customer acquisition and retention
DG	–	married	3	Ecuador	rural	handicrafts	5	beginner	Email, WhatsApp, Web Page, Facebook	computer	Customer acquisition and retention
DS	36	separated	3	Ecuador	rural	tourist interpretation centre	15	beginner	Instagram, WhatsApp, Facebook	smartphone	Tourist information
TE	51	married	6	Ecuador	rural	handicrafts	2	beginner	–	phone	–
GA	34	single	0	Ecuador	urban	travel agency	6	advanced	Instagram, WhatsApp, Facebook Business	smartphone, laptop	Marketing and promotion, customer acquisition and retention, sales and bookings, data collection and analysis
PO	33	married	1	Ecuador	urban	accommodation	2	advanced	Instagram, Airbnb	smartphone, laptop	Marketing and promotion, sales and bookings
GD	41	married	1	Ecuador	urban	non-profit organisation (tourism advocacy work)	0	advanced	Instagram, WhatsApp, Facebook, YouTube	smartphone, laptop	Education and advocacy, marketing and promotion
CV	41	married	3	Ecuador	urban	restaurant	10	advanced	Facebook, Twitter, Instagram, Uber Eats	smartphone, laptop	Management, marketing and promotion
AD	47	married	3	Ecuador	rural	restaurant	1	beginner	–	–	–
IY	50	married	5	Ecuador	rural	handicrafts	5	beginner	–	–	–
MA	61	married	11	Ecuador	rural	restaurant	0	beginner	–	–	–
PV	62	separated	4	Ecuador	urban	restaurant	10	beginner	–	smartphone	Marketing and promotion
SM	–	married	4	Ecuador	rural	restaurant	7	beginner	WhatsApp	smartphone	–
SG	–	married	2	Ecuador	rural	restaurant	2	beginner	–	smartphone	–
YM	33	married	1	Ecuador	urban	transport	25	intermediate	Instagram, Facebook, Booking.com	smartphone, laptop	Marketing and promotion, customer acquisition and retention
OP	62	married	2	Mexico	rural	training and consultancy	–	intermediate	WhatsApp	smartphone	Marketing and promotion
NH	25	single mother	5	Mexico	urban	restaurant	3	beginner	WhatsApp	smartphone	–
IL	55	married	2	Mexico	urban	restaurant	3	advanced	Google+, Facebook, Instagram, TripAdvisor, email	smartphone	Customer acquisition and retention, sales and bookings, reputation management

EN	42	married	1	Mexico	rural	tour operator	35	advanced	Facebook, Instagram, TripAdvisor, Google, WhatsApp	smartphone, laptop	Marketing and promotion, sales and bookings, reputation management
CP	40	married	2	Mexico	rural	consultancy, tour operator	15	advanced	Facebook, Twitter, Instagram	–	Marketing and promotion, sales and bookings
SC	53	Divorced	2	Mexico	rural	handicrafts	–	beginner	Facebook	personal computer	–
MS	22	Married	1	Mexico	rural	handicrafts	–	beginner	Facebook	none	–
VS	30	–	2	Mexico	rural	handicrafts	–	beginner	Facebook	none	–
MH	47	in an open relationship	2	Mexico	urban	handicrafts	300	beginner	WhatsApp	–	–
MP	45	married	2	Mexico	rural	accommodation	5	beginner	–	–	–
FA	29	married	3	Mexico	rural	tour operator	6	advanced	WhatsApp, Facebook	smartphone	Marketing and promotion, sales and bookings
RC	56	married	1	Mexico	urban	travel agency	3	advanced	–	–	Sales and bookings
AR	31	single	0	Mexico	–	travel agency	1	advanced	Facebook, Twitter, Instagram, Pinterest	smartphone	Marketing and promotion
NL	26	single	3	Mexico	rural	spiritual retreats	1	intermediate	Facebook, Eventbrite, LinkedIn	–	Marketing and promotion
LN	52	single	0	Mexico	urban	restaurant	10	advanced	Facebook	–	Marketing and promotion
SX	49	single	0	Mexico	urban	travel agency	4	advanced	YouTube, Instagram, Facebook	–	Customer acquisition and retention, sales and bookings, reputation management
XM	25	single	0	Mexico	urban	travel agency	2	advanced	Facebook, Mercado Libre	personal computer	Marketing and promotion, sales and bookings
RA	–	–	–	Mexico	rural	indigenous network of tourism	8	advanced	website, email, Flickr, TripAdvisor	smartphone	Customer acquisition and retention, Marketing and promotion
									Facebook, Skype and WhatsApp		

A thorough analysis was performed by using the initial codebook to code data. New codes were created when the researchers came across concepts that were not originally coded and memos were inserted as a reminder for the authors. MAXQDA's auto-code features were used to search for words that match the new codes. Based on the comments, the third author referred to the empirical material/data as required whenever a new concept was unexpectedly identified. Then, child codes in the initial codebook were grouped into themes and colour-coded based on the research questions and literature review. The thematic map was generated when the themes were checked in relation to the data sets. To ensure consistency, the initial coding was performed by the third author, and the coding was triangulated by the co-authors. The team met to review the initial codes and identify recurring patterns and themes. Any disagreements in coding were resolved through discussion until consensus was achieved.

## Findings

Overall, the participants in Ecuador and Mexico showed a strong interest in using digital technology for their businesses, but there was concern that the challenges they face with developing their digital competencies far exceed their perceived opportunities. [Figure 2](#) encapsulates the findings from this study - the faded grey text are the factors identified in the literature but not uncovered by this study; the text in black are factors that are from the literature and confirmed by this study; while the text in purple are new factors as revealed by the participants in this study but have not been previously established by the literature hence highlighting the contribution of this study to existing understanding of the key factors influencing WTEs' digital competencies.

## Opportunities

Two major opportunities associated with using digital technology, namely, business visibility and empowerment emerged from the findings. Business visibility has to do with inserting themselves in new structural conditions for doing business ([Figure 2](#)) and navigating a business environment that now also takes place in the digital world. Empowerment on the other hand, has to do with individual characteristics ([Figure 2](#)) and how women change their attitudes and perceptions of what they can do and achieve.

### *Visibility in an increasingly digital business environment*

All participants agreed on the importance of utilising digital technologies and platforms for their businesses in terms of increasing business visibility and raising awareness about their products and services as well as the destinations they operated in, thereby expanding the market domestically and internationally. YM (33, urban Ecuador, transport) commented, "*They [digital technologies] are necessary, they can no longer be avoided.*" Some participants have successfully incorporated digital technologies into their businesses. AR (31, not specified area of Mexico, travel agency) stressed the importance of digital platforms when she started her business online: "*I think my business could not live without [digital] platforms.*" The participants also believe that digital technologies will increase their market presence. For IY (50, rural Ecuador, handicrafts), digital platforms are important because "*you can upload photos of crafts for advertising. If there is no publicity, people do not know there are waterfalls and nice crafts.*"

### *Empowerment: self, financial and others*

The interview findings also revealed that WTEs could and have been empowered through utilising digital technologies and by running their businesses. LN (52, urban Mexico, restaurant) pointed out that digital technologies empower women with the opportunities to become

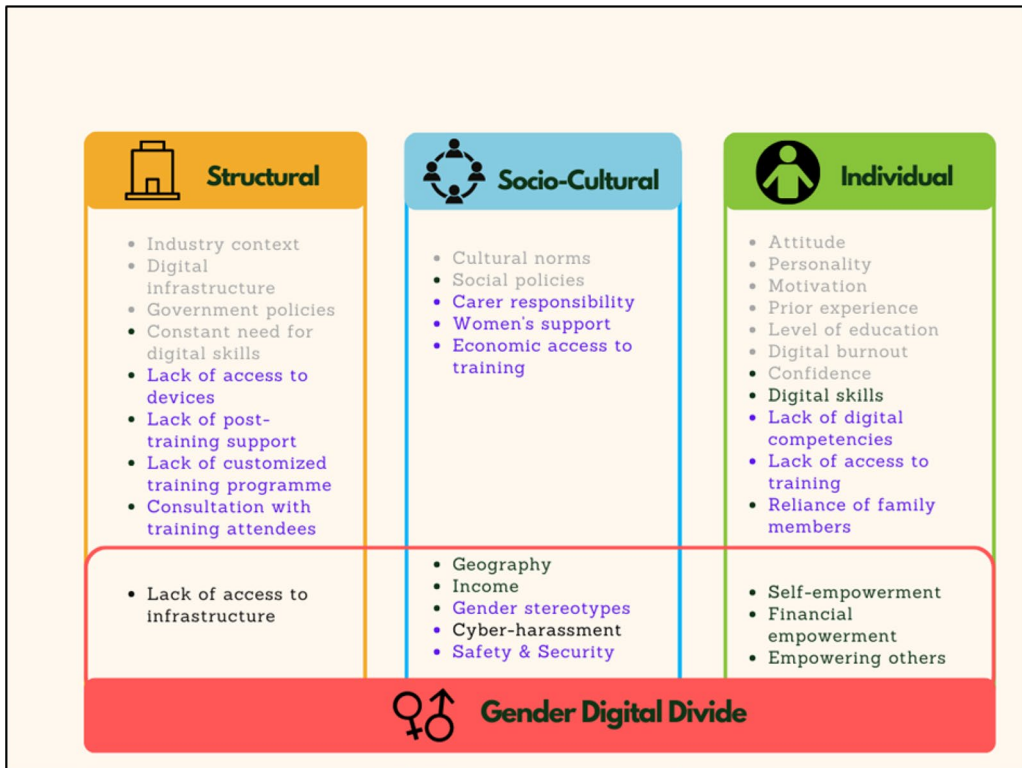


Figure 2. Key factors influencing Women Tourism Entrepreneurs' Digital Competencies.

business owners that would otherwise not exist due to the lack of resources. She remarked, "digital technologies give women opportunities to start a business because there are people who want to start a business, but maybe the lack of resources, they do not have it and is an impediment to start." SM (age not reported, rural Ecuador, restaurant) associated empowerment with financial independence gained from digital entrepreneurship: "I support myself financially, and my son and daughter in school. I have to buy food for the whole family because my husband works in fishing, and it is not enough." With the ensuing financial independence, SM was empowered to end an abusive domestic relationship. Several participants also reported personal empowerment, such as personal growth and freedom gained from digital entrepreneurship. SX (49, urban Mexico, travel agency), a founder of a travel agency commented, "social networks or platforms are a very important way to make the business grow and to grow as a businesswoman. That's empowering, gives you freedom." Women who have been empowered are more likely to empower other women and act as mentors to support other WTEs in achieving their dreams. This can be illustrated by SX's (49, urban Mexico, travel agency) comment: "One of my dreams is to bring together the communities and offer training to empower women in the communities doing this."

### Challenges

Despite being empowered by potential business growth through digital technologies and platforms, WTEs in this study experienced numerous barriers. Structural and sociocultural barriers (see Figure 2) included the lack of access to adequate digital devices and infrastructure. These barriers were also linked to social disparities related to geography and income. Individual barriers such as lack of digital competencies, lack of access to training, reliance on supporting staff and

family members, as well as issues around safety, security, and work-life balance were also reported.

### ***Lack of access to digital devices and infrastructure***

Although most participants own a mobile device, many do not have a computer or laptop, which they deemed crucial to perform business-related tasks. For instance, AY (50, rural Ecuador, accommodation) mentioned that she did not use her personal mobile phone for business and expressed, *"A computer would be nice, it would be good because we do not have it ... Like most of us do not have it."* Others underlined the need for newer mobile devices to perform business-related tasks. TE (51, rural Ecuador, handicrafts) reported,

We have no updated phones from the latest technology to take pictures and send them, only old phones to receive calls or send messages and nothing more ... They are the ones I use ... because there has not been an opportunity nor I know how to use it, so why would I buy one.

Several participants highlighted the issues of insufficient broadband and unstable internet connection. RA (age not reported, rural Mexico, indigenous network of tourism) reported, *"We use mobile technologies to overcome the lack of infrastructure in remote areas. In towns or cities, access to technology is not a problem, but having access to signal and technical support is a problem in remote areas."* FA (29, rural Mexico, tour operator) concurred by saying, *"the biggest issue is that there is no internet access in the rural communities."* OP (62, rural Mexico, training and consultancy) further pointed out the challenges of digital infrastructure development in rural areas:

If it is cloudy and drizzling, then no internet reception ... There are hills everywhere, that limits any system you want, no matter what good intention the government has about providing access to the internet ... It is very difficult to download a one-page file, cannot upload photos as it is considered big files. It barely works for WhatsApp.

### ***Lack of digital competencies***

The participants' digital competencies varied considerably. Many participants have little experience with digital platforms. TE (51, rural Ecuador, handicrafts) attributed it to her lack of education, stating: *"If I had studied, it would be different, I only got through 6th grade and that was years ago"*. MH (47, urban Mexico, handicrafts) shared a similar view: *"I didn't study much but I would like to see how digital technology could be used to distribute my goods, my arts."* Some participants were just starting to use digital tools. For instance, NL (26, rural Mexico, spiritual retreats) mentioned, *"Only the basic of Facebook ... I'm just starting to use Eventbrite which I discovered that there you can advertise your event."* Only a few participants have used digital tools since the inception of their businesses, while others used social media fluently for non-business purposes.

Apart from the level of education and experience, lack of confidence and fear emerged as two reasons that could explain the digital competencies of these WTEs. SX (49, urban Mexico, travel agency) observed, *"Barriers and mindsets. It's just that. The tools are there if you have people who are not afraid of technology."* RC (56, urban Mexico, travel agency) has worked with many WTEs and believed that some women have a strong resistance to adopting digital technologies and platforms for their businesses. She stated, *"I think if someone doesn't want to be on a platform, they don't want to know about it, because they're thinking of the last century."* FA (29, rural Mexico, tour operator) believed that encouragement and support for women entrepreneurs are essential to overcome these barriers:

I must recognize that women do not have studies and that I also tell them [other WTEs] that I'm afraid of touching the computer, I'm afraid of going online, I don't know how to do it. So that it breaks the fear they have of connecting through the internet.

### **Lack of access to training**

Many participants wanted to improve their digital competencies, regardless of the level of their experience and age. XM (25, urban Mexico, travel agency) who has no experience with digital platforms commented, *"Because I do not understand the platform. I think I should take a course to do so."* NH (25, urban Mexico, restaurant) agreed, *"I have not had any training. I need training."* MP (45, rural Mexico, accommodation) commented, *"I have heard about virtual stores, so I would like to learn how to do that, to be able to sell products through virtual stores."* EN (42, rural Mexico, tour operator) who had some level of digital skills expressed a strong interest in further advancing her digital competencies: *"Well, I think I would also like to learn the know-how, with whom, and the best way to integrate e-commerce store on my website."*

However, some participants mentioned that the lack of access to digital competency training was a barrier for them. Distance is the main access issue for WTEs in rural areas, while others find the cost of training an impediment. XM (25, urban Mexico, travel agency) cautioned, *"I've heard a lot of people who paid for very expensive courses and did not learn good things. Some courses are very good and not so expensive, but you have to know how to look for them."* The participants also reported domestic responsibilities as a barrier to attending training programmes. DG (age not reported, rural Ecuador, handicrafts) expressed her interest in training but was unable to continue as she needs to care for her grandchild: *"I have to look after him [her grandchild]. There was a terrific workshop once and I want to go but I could not continue. It's always about the schedule and yes, it has happened to me."*

For those who had access to training, their experience varied. Reflecting on her training experience, DG (age not reported, rural Ecuador, handicrafts) stated, *"I will no longer come to some of these workshops because they are always the same."* A handful of participants who received training on digital competencies said they did not receive post-training support. Training materials were either not provided or inadequate to enable participants to engage in self-learning after the initial training session. RA (age not reported, rural Mexico, indigenous network of tourism), commented:

When the trainers go away, the workshop participants don't know how to continue with the new technologies. Because of the lack of manuals or resources after the training, they stop using the technologies. Often there is no follow up or evaluation of the training, nor monitoring after the training.

Many participants voiced their frustration with generic digital competency training programmes that were not tailored to their individual learning needs. Some participants reported their preference for hands-on and personalised training. For instance, RA (age not reported, rural Mexico, indigenous network of tourism) stated, *"Ideally, we could create something during the workshop that will be of immediate use."* YM (33, urban Ecuador, transport) suggested a lower trainer-trainee ratio would be helpful: *"With the fewest possible people, more personalised, so people can present their cases and learn more."* Related to the challenge of the lack of adequate digital devices, some participants recommended that training providers provide the devices during the sessions. PV (62, urban Ecuador, restaurant), for example, requested, *"You bring me the device to practice. With a machine and someone who teaches me because just like that [without a device] you cannot learn."*

Several participants emphasised the importance of sharing their knowledge and experience through networking, which was seen as an invaluable part of attending training programmes where *"women come together, know each other"* (YM, 33, urban Ecuador, transport) and WTEs *"make connections ... as tourism is about the relationship with people"* (GA, 34, urban Ecuador, travel agency). Seeing someone similar to themselves or having someone to look up to as their role model, to succeed and develop their businesses through sustained effort, appeared to increase participants' digital competency self-efficacy.

### **Reliance on family members and support staff**

Several participants, the majority of them above 50, reported their reliance on family members to utilise digital technologies for their business. AY (50, rural Ecuador, accommodation) stated, *"I'm always asking help to create a Facebook profile, WhatsApp account and e-mail, I mean I can't handle it and it's my children or my daughter-in-law who are teaching me."* DS (36, rural Ecuador, tourist interpretation centre) echoed, *"I do not know those things, but my daughter is teaching me, to upload pictures of tourists online"*. IY (50, rural Ecuador, handicrafts) who does not own a phone shared a similar view: *"I prefer that my husband does it [handle digital platforms]"*. Like many other participants, MA (61, rural Ecuador, restaurant) delegated digital tasks to a family member: *"Now my daughter-in-law takes care of it."* Yet SX (49, urban Mexico, travel agency), regretted hiring family members, commented, *"Sometimes we hire people because they are friends or because they are your family to support you, but sometimes it is not quite right because they may not give the results you wanted."*

A few participants resorted to hiring specialists to manage the digital side of their businesses. YM (33, urban Ecuador, transport) remarked, *"I cannot be thinking all of administrative and dealing with that issue as well. When we are all ready to have the digital platform, we will find someone to handle it."* SM (age not reported, rural Ecuador, restaurant) delegated some of the digital marketing tasks to a staff: *"Well, I use the phone, WhatsApp and the internet, but I have someone who is in charge of advertising, he keeps the promotions running."* Meanwhile, OP (62, rural Mexico, training and consulting) raised the issue of hiring a third party, *"We really feel they don't do what we want them to do ... I did not want to re-hire the service because the person is not very involved in tourism."*

### **Safety, security, and work-life balance**

Some participants voiced their personal experiences of being verbally attacked on social media; however, this never prevented them from using digital technologies and platforms. In fact, they learnt how to circumvent this issue as evidenced by EN (42, rural Mexico, tour operator):

I have a fan club with a lot of men who hate me, just because I am not from here. But I've done more good things for this place than those who are from here, which angered them to see that I post things on social networks ... They criticised me and published in the newspaper bad publicity referring to me. I got back at them with the proper response on social media.

Meanwhile, PV (62, urban Ecuador, restaurant) chose to persevere by not allowing the attackers to provoke her: *"Good people think well and congratulate me. And people of bad faith sometimes even write ugly things about me on Facebook. But I do not mind."* Other participants raised their concerns about e-commerce security. GA (34, urban Ecuador, travel agency) explained, *"Because here in Ecuador is a bit risky to use a credit card."*

Another challenge of using digital technologies for WTEs is maintaining the boundary between work and life. DG (age not reported, rural Ecuador, handicrafts) who engaged with her clients online when her child was asleep admitted, *"The truth is that I don't have enough time to devote myself to all digital platforms."* Acknowledging the challenges, YM (33, urban Ecuador, transport) commented,

Sometimes this causes certain difficulties because this [digital platform] is 24/7. It does cause some commentaries [from her husband] like: 'take it slower', 'hire more staff so that customers don't call you all the time', but the important thing is that there needs to be support coming from our family.

## **Discussion**

### **Theoretical discussion**

This study set out with the aim of investigating the opportunities and challenges faced by WTEs in using digital platforms for their businesses. The study contributes to existing entrepreneurship

literature by identifying the structural, sociocultural and individual factors, as well as the gender digital divide that influence WTEs' digital competencies and impede growth in women's tourism businesses. Our findings reveal how gender digital divide intersecting with social digital divide in influencing the entrepreneurial digital competencies among women entrepreneurs in Mexico and Ecuador. More specifically, our findings show that women are disadvantaged in gaining digital competencies because of structural inequalities (e.g. the lack of access to adequate digital infrastructures and devices, stable internet connection, education, and good quality digital training), social inequalities (e.g. the disparity in digital access in rural areas, lack of economic resources to get appropriate training), as well as gender stereotypes (e.g. gendered psychological barriers to technology adoption, more domestic responsibilities). Many of these structural and social inequalities are further compounded by urban-rural divide with WTEs operating in rural areas being the most disadvantaged group. These findings are very much aligned with the literature (Dredge et al., 2019; Dy et al., 2017; Olsson & Bernhard, 2021; Rajahonka & Villman, 2019). However, our findings also show women's perceptions about being consulted on prospective training topics and programmes, the provision of adequate digital infrastructure and devices in training efforts, gender-inclusive digital training content, and post-training support and networks, as practical ways of enhancing digital training initiatives.

Surprisingly, despite the literature on entrenched patriarchy in some cultures that have been found to contribute to WTEs' access to enterprise (Panta & Thapa, 2018), the women in this study have not explicitly attributed patriarchal culture as an impediment. Rather, some women recognise how entrepreneurship has enabled them to break some sociocultural norms and stereotypes in relation to their place in society. Further, the perceived lack of entrepreneurial digital competencies was reported by WTEs from different age groups, contradicting existing literature that suggests young people who are digital natives and therefore likely to be more fluent in digital entrepreneurship (Kwiatek et al., 2021). However, WTEs above 50 years old did report their reliance on family members to utilise digital technologies for their business more than younger participants. As this study has revealed, women's entrepreneurial digital competencies are a complex product of interwoven structural, gender, and sociocultural factors where clear-cut divisions become elusive.

An observation from the findings is the intersectional nuances of digital technologies. This is to say, that depending on their access to digital education, proximity to urban centres, and presence and support from family members, participants had different concepts of digital platforms and technologies. Some participants presented a materialist concept of digital technologies where they associated digital technologies with the acquisition of devices, materials, hardware, connectivity, while other WTEs possessed a conspicuous concept of digital technologies centred on building an image and social status. There was also a functionalist concept of digital technologies, where WTEs perceive digital platforms as 'tools to an end', serving their businesses' daily operations such as marketing and management. Many of the participants in this study had an entrepreneurial concept of digital technologies that lead to new forms of doing business, generating value and entering the tourism economy.

Regardless of the level of digital competencies, all WTEs interviewed in this study are cognisant of the opportunities for business growth enabled by digital platforms. These women are aware of what is lacking whether this is in terms of knowledge or infrastructure and are proactive in taking steps to address the shortcomings where they are able to (e.g. engaging family members for social media support and attending training programmes). Despite having limited resources, they become resourceful and active agents in shaping their businesses and their future. These pieces of evidence point to the need for change in the discourse on women tourism entrepreneurs, from "empowering" them (Moswete & Lacey, 2015) to "enabling" the already "empowered" women. These "empowered" women not only have been enabling themselves by gaining financial independence, freedom, and respect through their businesses, but they also act as actors of social transformation in empowering, mentoring and supporting other



WTEs as well as empowering their families and communities through gendered entrepreneurial practices in which generating income becomes as important as generating jobs for others. Beyond, or in parallel with, dependency on family members for digital skills, the findings also identify co-learning and management practices. In various cases, women entrepreneurs purposefully delegate the use of social media for their businesses because they value their family members' inputs and put them at work for the common good of the family business. This finding reveals the framing of alternative economies (Gibson-Graham, 2008; Cave & Dredge, 2020) among WTEs as they view their businesses as an interconnected system of interpersonal relationships. Women's emphasis on empowering and enabling others through digital entrepreneurial practices manifests in social innovation, which accentuates social transformational goals beyond profits (Kimbu & Ngoasong, 2016).

### ***Practical and policy implications***

The findings of this study lay the foundations for women's entrepreneurship policy development in relation to digital competencies. Our study reveals varying realities among the participants determined by structural and sociocultural factors, such as levels of education, income and inequalities between women entrepreneurs in rural and urban areas. This study extends existing digital entrepreneurship literature that highlights the gaps between developed and developing countries (Henry et al., 2017). While useful in mobilising aid to resource-scarce contexts, generalised assumptions about the experiences and needs of women entrepreneurs in these contexts fail to address the multifaceted needs of women entrepreneurs.

Our study highlights how entrepreneurial aid and public initiatives should focus on providing hardware (i.e. adequate mobile devices and wireless range extenders) and internet access to enable digital competencies, with special attention on rural areas and women with low incomes. There is simply no point to begin discussing digital competency training when the basic infrastructure is not available. National strategies and grant initiatives for tourism entrepreneurs such as *Emprende Turismo* in Ecuador (Mintur, 2022), should address internet access and access to digital devices as cornerstones to ensure business presence in national and international markets. Moreover, initiatives for entrepreneurship that do not address these issues can further widen inequality gaps in relation to gender, age, socioeconomic condition, and the urban/rural divide. Further, the criticisms around the lack of clear targets, policy commitments and consultation mechanisms (Piacentini, 2013) are observed in this study where WTEs commented on how existing training programmes were not tailored to their learning needs and the lack of post-training support. This points to the need for entrepreneurship training programmes that are gender-inclusive, include continuing professional development, and enable the organisation of women's networks for mutual support. Individual gendered realities (e.g. juggling between domestic responsibilities and work) and perceived lack of skills and self-confidence, which were found to impede women's business growth in previous studies (Hallak et al., 2015; Henry et al., 2017; Lasio et al., 2020), emerge as key sociocultural and psychological barriers to women's entrepreneurial digital competencies and digital adoption. Resonating the call of Henry et al. (2017), gender-focused entrepreneurship policies and interventions that address cultural and normative challenges are warranted. A policy implication of the latter would be that, more than designing training programs *for* women, this study highlights the necessity of creating training programs *with* women entrepreneurs in which a continuous process of co-creation and co-management, in which continuous interaction and co-responsibility between trainers and trainees could address the specific, interwoven and complex structural, sociocultural and individual issues influencing WTE's entrepreneurial digital competencies. A collaborative, bottom-up approach in the design of public initiatives, cooperation programmes and international aid that takes into account women's voices throughout the process could benefit participants in Ecuador, México and other parts of the world.

As a direct result of the findings from these interviews, a one-day free training programme was developed specifically for women entrepreneurs in Ecuador and Mexico. The programme was funded by the Australian Government, Department of Foreign Affairs and Trade under the Council on Australia Latin America Relations (COALAR) grant. The face-to-face digital training programme was designed to improve the EDCs of WTEs from a gendered perspective. The programme emphasised a tailored approach to balancing theoretical and practical learning. Based on the challenges identified in this study, the content was designed in a way where the trainees could engage with the learning activities using mobile devices rather than a laptop or desktop. During the session, the trainer and training assistants worked with trainees of varying levels of experience to set up and create content on digital platforms. Given the women's concerns about cyber safety, security and work-life balance, the training content also covered a section on digital well-being. As domestic responsibility was found to be a barrier to women's participation in training, we created a family-friendly environment where young children were welcomed.

In response to the gendered entrepreneurial practices, the training programme was also designed to facilitate social-based and cooperative learning. For instance, trainees were allowed and encouraged to attend the workshop with their support person. To enable trainees to continue learning independently and collaboratively after the initial session, the training materials with detailed guidance were made available to all trainees and a Facebook group was created to offer follow-ups post-training, provide peer-to-peer support, and facilitate networking. While this social element was appreciated by the participants, what would be more useful is a provisional budget for a "digital competency assistant (DCA)" who can answer questions and help trainees with implementations post-training in their own locality. Future training providers are encouraged to install a central DCA for cohorts of trainees for post-training support.

### **Limitations**

Due to funding constraints, this study was conducted in two regions of Mexico and Ecuador, limiting the generalisability of the findings nationwide and to other countries. It is important to acknowledge that there are parallel worlds in these countries, as our findings have shown that some women, especially those from rural areas face bigger challenges, have a lower level of digital competencies, and limited access to digital infrastructure than others. Further research is required to investigate the digital disparities among women entrepreneurs, taking into consideration factors such as age, social class, and urban-rural gaps. Likewise, the availability of digital technology and training programmes is not equally available in other countries, which may limit the transferability of the insights to other geographical locations and require further research. The snowball sampling technique has led to a pool of participants who are connected to various women's and tourism organisations, which may present a rather homogenous view. Further, given the subjective nature of qualitative case study research, researcher bias and prior knowledge can influence the interpretation of the data. In addition, whether or not these factors will influence male tourism entrepreneurs in Ecuador and Mexico or comparative countries would make an interesting insight and future studies could explore this. Importantly, word limitation prevents us from detailing the intersectional nuances of digital technologies, for example how digital platforms are perceived differently amongst the participants depending on their access to digital education, proximity to urban centres, presence and support from family members. Future research could explore in further depth, the multiple concepts and meanings of digital technologies such as materialist, conspicuous, functionalist and entrepreneurial. Finally, it is important to acknowledge that being a woman has different meanings across cultures, as is supporting WTEs across cultures. These cultural differences have not been examined in detail in our study but would make for an insightful research agenda.

## Conclusion

This study provides implications for social policy addressing entrepreneurship education, specifically, digital entrepreneurship training for WTEs. The study reveals that many WTEs are not yet given the conditions and resources to thrive, and much more can be done to enable digital competencies for business visibility and subsequently, empowerment of self, financial and others. As illustrated by the revised theoretical framework in [Figure 2](#), our findings show that women are disadvantaged in gaining digital competencies because of structural inequalities (e.g. lack of access to devices, lack of post-training support, lack of customised training programme), social inequalities (e.g. carer responsibility, the support of other women, economic access to training), individual factors (e.g. reliance on family members, lack of digital skills), and contributed by the gender digital divide (e.g. gender stereotypes and safety pertaining to cyber sexual harassment). The outcomes of this study provide a nuanced understanding of WTEs' points of view and needs, their challenges, barriers, and opportunities in using digital platforms to improve their business performance and access to resources. A direct practical outcome of the study has been the design and delivery of gender-inclusive digital competency training for women entrepreneurs in tourism informed by the findings. Responding to UNWTO's (2021) call for tourism recovery to be gender-sensitive and inclusive, insights from this study are especially timely and relevant in the post-COVID era.

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