

# Empowering Ethnic Minority Women: Perceptions and Barriers in Digital Community-Based Ecotourism in Hữu Liên Commune, Lạng Sơn Province, Vietnam

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**Abstract:** Tourism is a key economic sector with significant potential to support the 2030 Agenda for Sustainable Development. This study examines the role of community-based ecotourism (CBE) in empowering ethnic minority women in Hữu Liên commune, Lạng Sơn province, Vietnam as a case study, with a focus on perceptions of CBE and barriers related to digital transformation. Data from interviews and focus groups indicate that while women are increasingly familiar with digital tools, their skills in digital marketing, content creation, and tourism planning remain underdeveloped. The study underscores the urgent need for short-term measures aligned with a long-term vision to address these gaps and support sustainable tourism development. The findings provide valuable insights for policymakers and development organizations seeking to enhance gender equality and empower women in the digital era, thereby contributing to the achievement of the Sustainable Development Goal 5.B.

**Keywords:** Ethnic minority women, digital transformation, women empowerment, community-based ecotourism.

**Subject classification:** Sociology.

## 1. Introduction

Tourism is regarded as one of the most significant economic sectors worldwide and is seen as a vital instrument for advancing the 2030 Agenda for Sustainable

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Development (Boluk et al., 2017; Peña-Sánchez et al., 2020; UNWTO & UNDP., 2018). However, tourism development should be approached with caution in the context of developing countries such as Vietnam, as its benefits are not automatically guaranteed in the absence of sustainable management and equitable benefit-sharing. In particular, rapid and large-scale tourism growth can lead to social and environmental consequences if the benefits are concentrated in the hands of only a small group. Therefore, tourism development should be oriented toward sustainability - meeting economic, social, cultural, and environmental requirements simultaneously, ensuring a fair balance of interests among stakeholders, and safeguarding the ability to meet future needs. Accordingly, community-based ecotourism (CBE) has emerged as a promising solution (Afenyo & Amuquandoh, 2014). CBE is considered an efficient mechanism for alleviating conflicts between conservation and development (Ma et al., 2019). It is considered a sustainable approach to develop tourism (Stone, 1989) as well as an approach to community development specifically targeted towards impoverished rural areas (Scheyvens, 1999).

Numerous studies have demonstrated that tourism, in general, plays a significant role in empowering women, including in the spheres of economics, employment, educational, and political participation (Zhang & Zhang, 2021). In particular, tourism plays a crucial role in promoting employment and entrepreneurship opportunities for women (Elshaer et al., 2021; Jackman, 2022; Nguyen, 2022). In CBE, ethnic minority women play a vital role as they are the producers, performers, and custodians of local art, skills, and traditional culture. However, ethnic minority women still face barriers in accessing and benefiting from development. Compared to their male counterparts, they tend to have less stable employment and are more vulnerable (Thu, 2017; UN Women & ISDS, 2021). Gender-based constraints such as limited education, restrictive social norms, and lack of financial access can hinder women's ability to leverage tourism for empowerment. At the same time, the rapid digitalization of tourism (through online marketing, mobile platforms, and information & communications technology (ICT) tools) presents both opportunities and challenges for rural women entrepreneurs. Digital technology can help expand markets and enhance business skills; however, gender gaps in digital literacy and access risk exacerbating inequalities if left unaddressed (Chieu et al., 2022).

Vietnam has explicitly recognized these issues, and its SDG targets include Goal 5B of the United Nations Sustainable Development Goals, which calls for enhancing the use of ICT to empower women. In this context, the present study investigates how CBE can empower ethnic minority women in Hữu Liên commune (Lạng Sơn province) and examines the perceptions and barriers these women face in the era of digital transformation. Hữu Liên is a nascent ecotourism destination with diverse ethnic groups (including the Tày, Dao, etc.) and unique natural resources (e.g Hữu Liên Nature Reserve). However, tourism activities here are still in their early, largely unplanned stages. By surveying women-led homestays and

interviewing local stakeholders, we aim to: (1) document women's current engagement and skills in tourism and digital media; (2) identify perceived strengths, weaknesses, and needs in Hữu Liên's ecotourism development; and (3) provide evidence-based recommendations for gender-inclusive digital capacity-building. This case study contributes to the literature on tourism-led women's empowerment by linking community tourism, digital inclusion, and sustainable development in a specific Vietnamese context.

## **2. Theoretical foundations**

### ***2.1. CBE: theory and innovation***

CBE is broadly defined as a form of sustainable tourism in which local residents manage and benefit directly from tourism activities in environmentally and culturally sensitive ways. Guerrero-Moreno and Oliveira-Junior (2024) note that "CBE has emerged as an alternative that seeks to integrate environmental, cultural, social, and economic sustainability through community participation". In practice, CBE builds on classical ecotourism principles (conserving natural areas, respecting local culture) and on community-based tourism ideals (placing local people at the center of planning and benefit-sharing) (Guerrero-Moreno & Oliveira-Junior, 2024; Jackson, 2025). By design, CBE aims to reconcile conservation and development goals - for example, by allocating tourism revenue to fund environmental protection while creating local livelihoods. As Jackson (2025) emphasizes, CBE fosters economic growth and social development "while minimizing negative environmental and cultural impacts". In other words, CBE empowers host communities to "own, manage, and benefit from" tourism initiatives (e.g. lodges, tours, handicraft markets, etc.), which can directly contribute to poverty reduction and increase employment opportunities (advancing SDGs 1 and 8) (Jackson, 2025).

Contemporary applications of CBE increasingly incorporate technology. For example, many community operators now use digital marketing and online booking platforms to reach distant markets (e.g. social media, community websites, etc.). Such innovations can amplify the economic benefits of CBE by expanding visitor markets and improving product promotion. However, successful digital adoption often requires training and infrastructure support. Recent studies suggest that community tourism enterprises that adopt ICT (e.g. mobile marketing) can generate more resilient and diversified incomes (del Pino Rodríguez-Vera et al., 2025). CBE constitutes a transformative approach to sustainable tourism - one that explicitly builds local capacity, preserves cultural heritage, and aligns with broader development goals (Guerrero-Moreno & Oliveira-Junior, 2024).

## ***2.2. Women's empowerment in tourism and the digital economy***

Women's empowerment in tourism refers to the process by which women acquire greater control over economic resources, decision-making, and social status within tourism and related sectors. Tourism has long been recognized as a vehicle for women's empowerment because it offers labor and entrepreneurship opportunities that are particularly accessible to women (e.g. homestays, handicrafts, guiding, etc.) (del Pino Rodríguez-Vera et al., 2025; Jackson, 2025). Scheyvens (1999) classic tourism-empowerment framework (with four dimensions: psychological, social, economic and political empowerment) remains widely used, but newer studies (Scheyvens & van der Watt, 2021) argue that environmental and cultural dimensions should also be included when tourism is intended to support sustainable development. According to Scheyvens and van der Watt (2021), tourism-linked empowerment frameworks can be "strengthened through the addition of an environmental and a cultural dimension" to capture how women, as custodians of culture and stewards of natural resources, gain new capacities.

In tourism, empirical research confirms that women participate in, and benefit from, tourism in multiple ways. Women often constitute a large share of the tourism workforce, albeit disproportionately in informal or low-paid jobs (del Pino Rodríguez-Vera et al., 2025). They also frequently run micro- and small-scale tourism businesses (e.g. craft production, homestays, food services, etc.), thereby earning income and building entrepreneurial skills. Emerging trends in tourism studies highlight sustainability, innovation and gender empowerment - underscoring that women entrepreneurs can drive inclusive development (del Pino Rodríguez-Vera et al., 2025). Promoting women entrepreneurs in tourism contributes to broader social benefits, including increased job creation, economic diversification within the community, and enhanced resilience in the post-pandemic recovery (del Pino Rodríguez-Vera et al., 2025).

The convergence of tourism with the digital economy has opened new avenues for women's economic empowerment. Digital platforms (social media, online marketplaces, and e-commerce) enable women in remote areas to market tourism services and products beyond their immediate local markets. del Pino Rodríguez-Vera et al. (2025) find that digitalization can support women entrepreneurs in tourism, including through the use of online platforms to promote and sell tourism products. For example, a community-run guesthouse can reach international visitors via Facebook and booking apps; women can sell handicrafts through online craft marketplaces, and form digital networks to share knowledge. These digital tools expand women's reach and autonomy, potentially shifting traditional gender roles. In summary, women's empowerment in tourism is understood as a multi-faceted process: tourism creates opportunities for income, skills development, and leadership (especially if women control businesses and resources), and the digital economy can magnify these effects by broadening market

access (del Pino Rodríguez-Vera et al., 2025; Jackson, 2025). Nonetheless, the literature also cautions that structural inequities persist (women's jobs tend to be low-status, and female tourism ministers remain underrepresented), so empowerment outcomes are not automatic (del Pino Rodríguez-Vera et al., 2025).

### ***2.3. Digital transformation: challenges for ethnic minority women***

Although digital technologies offer opportunities for women's empowerment, ethnic minority women often face multiple challenges in digital transition. A large and growing body of literature documents the digital gender divide, particularly in rural and marginalized populations (UNICEF, 2023). Ortiz Osejo et al. (2025) studied indigenous Mayan women in rural Guatemala and found that while basic digital literacy training significantly improved women's ability to use online services and launch small ventures, "ongoing barriers - most notably limited infrastructure, constrained financial resources, and insufficient institutional support" continued to hamper the long-term viability of digital centers. In the Vietnamese context, preliminary survey data indicates that only a small proportion of women have the skills to use internet-connected computers for tourism activities, with most relying on smartphones for basic tasks such as social media and information searches. This pattern is similar to that seen in many developing countries, where rural women with mobile access tend to use it mainly for simple activities like social networking and often lack the training or confidence to apply digital tools for business or accessing market information.

Language and cultural factors also shape digital participation. Many ethnic minority women primarily speak local languages and have limited formal schooling, which makes digital content in national or global languages less accessible. In some communities, patriarchal norms limit women's mobility and educational opportunities, and these restrictions also affect their ability to join ICT training programs. Consequently, indigenous women often experience overlapping challenges, including limited infrastructure and device access, low digital literacy, and socio-cultural barriers related to language and gender norms, all of which constrain their engagement in the digital economy (Ortiz Osejo et al., 2025; UNICEF, 2023).

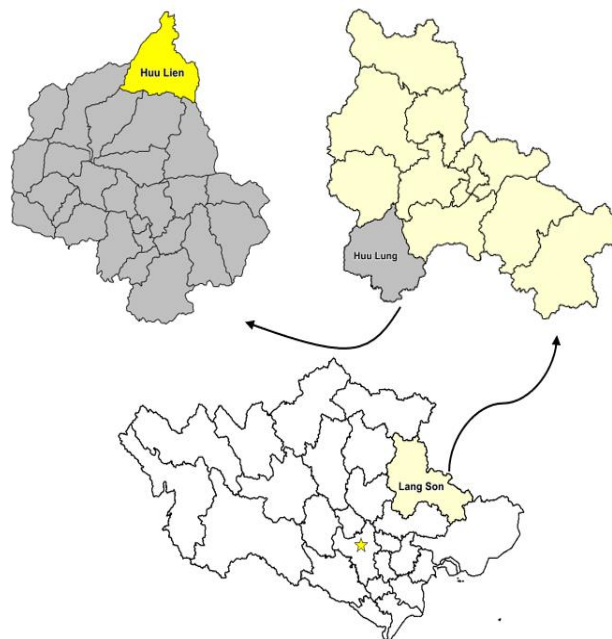
While CBE has the potential to empower ethnic minority women both economically and socially, the literature notes that this potential can only be realized if digital inequities are addressed. Many ethnic minority women face substantial gaps in connectivity, funding, education, and training, which limit their ability to adopt digital business models such as online marketing and reservation systems. Closing these gaps requires targeted capacity-building programs, financial support mechanisms, and locally relevant digital curricula, designed with an understanding of how gender, ethnicity, and rural contexts intersect in the digital transformation process (Ortiz Osejo et al., 2025; UNICEF, 2023). These insights underscore the importance of examining women's perceptions and barriers in digital CBE settings to inform sustainable development policies aligned with SDG 5B.

### 3. Study area

The research was conducted in Hữu Liên commune, one of the 26 communes in Hữu Lũng District (prior to its administrative merger) in Lạng Sơn province. The commune has a population of 3,810, approximately 49% of whom are women, from 815 households. The commune is home to nine ethnic groups - the Kinh, Tày, Nùng, Dao, Mông, Cao Lan, Sán Dìu, Mường, and Thái - each with their own rich customs and traditions. Approximately 144 women from these villages are engaged in tourism, with the largest numbers coming from Làng Bền and Đoàn Kết villages.

Hữu Liên is an emerging visitor destination, currently in the early stages of tourism development. At present, only a few self-initiated service businesses cater to visitors, while several tourism projects are in progress with ongoing calls for investors. Given its reliance on sensitive natural resources - including diverse rare and endemic species and a striking karst valley landscape - sustainable tourism development is both essential and urgent. With unique natural assets intertwined with the cultural heritage of its ethnic minorities, Hữu Liên holds considerable potential for CBE. However, these forms of tourism are highly sensitive and vulnerable to external impacts. As Scheyvens (1999) notes, ecotourism can only succeed when benefits are shared fairly, enabling local communities to gain economic, cultural, social, and political advantages. In this context, enhancing the capacity of Hữu Liên's local community for ecotourism development in the digital age is crucial, particularly for ethnic minority women. While digital transformation presents opportunities for economic empowerment, these women continue to face substantial barriers, including limited access to technology and finance, restricted educational opportunities, language barriers, and insufficient digital literacy.

**Figure 1:** Map of Study Area



*Source:* The authors.

## 4. Methodology

### 4.1. Research design

The analytical framework was developed to clarify the two central themes of the study: (i) perceptions of CBE in the digital context, and (ii) the digital barriers faced by ethnic minority women in Hữu Liên, while also identifying the factors influencing CBE business performance and the degree of women's empowerment. The conceptual model follows an “input → output” logic.

In the input category, individual digital capacity is defined as the set of skills related to using smartphones or internet-connected computers, time spent online, extent of platform use, information search ability, digital presence, and practices in digital finance, along with digital barriers identified through self-reported limitations in online marketing, content creation skills, and the operation of social platforms.

The output category is reflected in several ways. The first is CBE performance, measured by the proportion of income derived from tourism and the range of services offered. The second is empowerment, assessed through self-reported outcomes such as increased employment/income, greater confidence in communication, participation in community activities, and an expanded voice within the household/community. Additionally, sustainability is considered a co-occurring output, reflected in awareness of resource conservation, environmental pressures (e.g., waste generation), and changes in architectural or cultural features driven by tourism.

We adopted a mixed methods case study approach to capture both quantitative and qualitative data. This approach aligns with similar studies in rural contexts that combine surveys with in-depth interviews (Nursanti & Nurhayati, 2024). Data collection took place in late 2023, comprising of the following:

*Structured survey:* all 15 women-led homestays identified in Hữu Liên were surveyed via a questionnaire. These respondents were purposefully selected to represent the complete population of women entrepreneurs currently active in CBE (a near-census of available cases). The survey elicited demographic information, tourism income sources, digital device usage, online activity, marketing channels, and self-assessed skills. Questions combined closed-ended items (e.g. Likert scales on skill levels) and multiple-choice selections regarding internet usage and social media use.

*Interviews and focus groups:* we conducted semi-structured interviews with key respondents at district and commune levels, including officials from the Department of Culture and Information, Women's Union, and People's Committees of Hữu Lũng and Hữu Liên. These interviews explored policy support, tourism development status, and women's roles. In addition, focus group discussions were held with groups of women

homestay owners to verify survey findings and elicit qualitative perspectives on challenges and needs. In total, eight in-depth interviews with officials and three focus groups consisting of four to six women each were conducted.

*Secondary data and observation:* supplementary information was gathered from local government reports (e.g. tourism statistics, program documents), and by direct observation (e.g. photographs, site visits) to document tourism facilities and conditions. Secondary sources also provided regional context on ethnic minority development.

Ethical considerations included informed consent and assurance of anonymity. The research was supported by the Lancang-Mekong Cooperation project on women's economic empowerment.

#### **4.2. Data analysis**

Quantitative data from the survey was input into excel for tabulation and descriptive analysis. We generated charts to summarize respondents' education levels, income sources, tourism activities, digital device skills, internet usage patterns, social media and payment platform usage, and self-rated competency in tourism-related skills. These findings were compared with relevant literature on rural digital adoption and tourism participation.

Qualitative data from interviews and focus groups were audio-recorded (with permission) and transcribed. We employed thematic coding to identify key themes related to perceptions of tourism potential and drawbacks, environmental concerns, cultural issues, and training needs. Insights from officials were used to corroborate survey results and elucidate contextual factors (e.g. policy initiatives, infrastructure plans). Where possible, we triangulated findings from different sources (e.g. cross-checking women's statements against official projections of visitor numbers).

This mixed methods design follows precedents in community tourism research: for example, Nursanti and Nurhayati (2024) similarly used interviews and questionnaires to explore digital adoption by rural women entrepreneurs. The data thus provides both breadth (the full sample of 15 women-led homestays) and depth (contextual narratives from stakeholders).

### **5. Results**

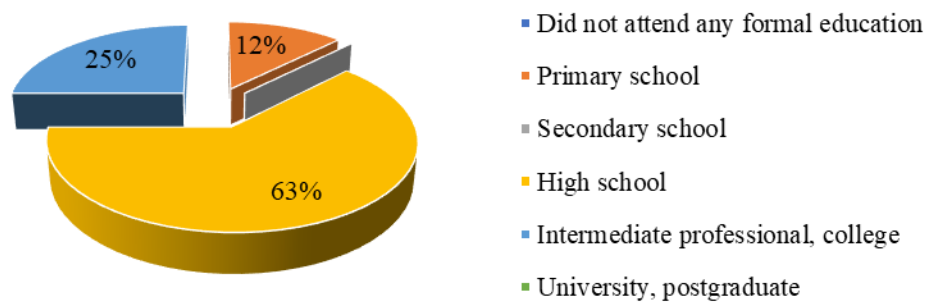
#### ***5.1. Landscape of digital literacy and barriers faced by women in tourism in Hữu Liên***

Among the 15 women-led homestays surveyed in Hữu Liên, most owners were middle-aged (35-50 years old) with low to medium educational attainment.



Specifically, 63% of the women surveyed had completed upper secondary school, around 25% had graduated from lower secondary school, and the remaining 13% had only completed primary education or had not finished lower secondary school. This suggests that while most women are literate and able to communicate in Vietnamese, very few have received post-secondary education. In practice, up to 70% of respondents reported lacking knowledge of finance and accounting, and 93% acknowledged having very limited skills in this area. Across the commune, only one homestay maintained a systematic accounting system. These findings are consistent with conditions in many other rural tourism destinations, where women entrepreneurs often lack formal business training (Nursanti & Nurhayati, 2024).

**Figure 2:** The Educational Background of the Respondents

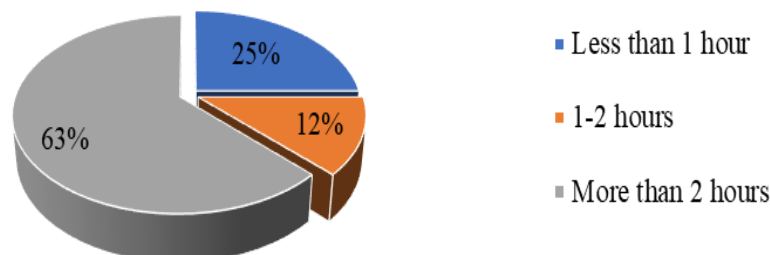


*Source:* Authors' survey data (2023).

In terms of digital literacy among women engaged in tourism in Hữu Liên, the survey results show that all respondents own a smartphone. Of these, 75% self-rated their skills as average and 25% as good, while internet-connected computer skills were low, with 30% reporting only basic skills and 70% indicating “no skills”.

Regarding internet usage, 63% of respondents reported using the internet for more than two hours per day, indicating a relatively high level of digital engagement (see Figure 3). In terms of platforms, 100% use Facebook or Zalo; only 25% use TikTok or Instagram.

**Figure 3:** Internet Usage Time of the Respondents



*Source:* Authors' survey data (2023).

In terms of accessibility, information searching is quite common (88% know how to use Google), but converting search results into business activities remains limited; payments are mainly made via bank transfer (88%), e-wallets account for 13%, and no one uses credit cards; 87% have never made mobile payments, creating barriers to online booking and sales.

The results indicate that although surface-level access to technology is relatively high (100% of surveyed women use the internet each day via smartphones), in-depth application for tourism business purposes is still very limited. Most women reported mainly using their phones for communication and accessing social media (such as Facebook, Zalo), for entertainment, or personal connection. Only a small proportion (less than 20%) had ever tried using online platforms to promote their homestay or services, and almost no one had experience in online selling or receiving payments. These figures illustrate a phenomenon known as the “second-level digital divide” - meaning that even with devices and basic skills, people still fail to leverage technology for livelihood or entrepreneurship purposes.

Survey results also show that internet use is primarily for social and informational purposes (100% for social media/information search), with only 63% using it for work (communicating with customers), and no one using advanced tools such as e-commerce platforms for tourism; digital activities lean more toward “consumption” rather than “content creation/transactions”. Although 88% frequently shop online and 38% follow livestreams, only 13% had ever livestreamed or used TikTok for self-promotion, and none had a website; many women said they did not know how to open an online store or livestream to sell products.

The context of Hũu Liên presents a relatively clear picture of the local technology landscape: “mobile-first,” oriented toward content consumption. This means that women engaged in tourism almost universally own smartphones, whereas computers are far less common, and they spend a significant amount of time online each day. Smartphone proficiency is at a moderate to fairly high level; by contrast, skills in using internet-connected computers remain low. Current online activities are mainly focused on social connections (Facebook/Zalo), information searches, and messaging with customers; activities such as independently producing content (high-quality photo sets, vertical short videos, local storytelling), consistently managing pages/channels, and conducting online sales-payment transactions remain limited and fragmented. This trend aligns with the broader picture in which mobile internet access dominates in developing countries, while fixed broadband remains less widespread (GSMA, 2024).

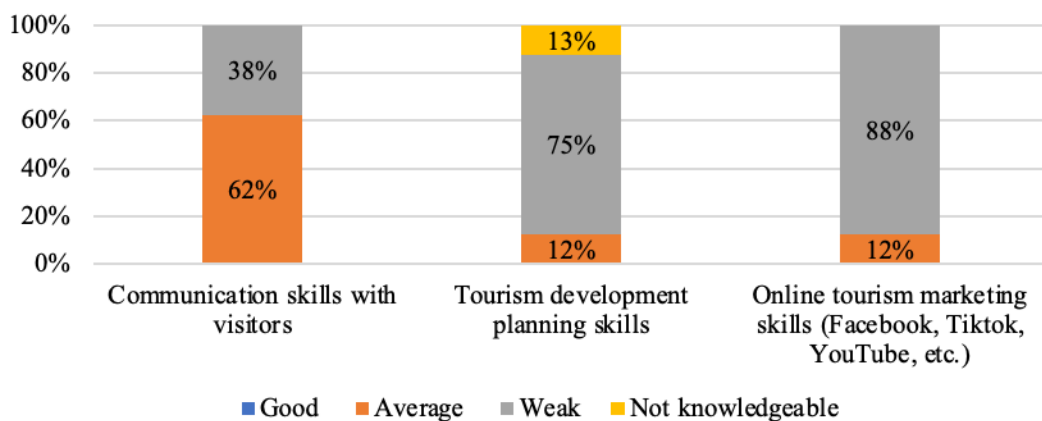
Regarding digital barriers and behaviors of women engaged in tourism in Hũu Liên, there are three major “bottlenecks” in the areas of content, distribution, and payment. *Firstly*, in terms of content, many personal pages or fan pages only have a few photos and basic information; older women are often reluctant to appear

on camera and hesitant to make videos, resulting in less engaging content. *Secondly*, in distribution, posting is irregular and lacks a fixed schedule; features such as events, groups, or pinned posts are rarely used; short videos and livestreams are also underutilized to expand reach. *Thirdly*, in payment, most customers are still accustomed to bank transfers; the “reservation - deposit - cancellation/change” process is not standardized, making it difficult for self-organized travelers to confirm bookings quickly.

Despite these strengths, respondents identified several internal challenges. The most frequently mentioned disadvantages were: (i) lack of knowledge and skills in tourism development, (ii) weak marketing skills among locals, and (iii) inability to build a local tourism brand. In other words, the community perceives “limited capabilities” of residents as the primary bottleneck, outweighing external issues like poor roads or site deterioration. Similar results are found in other places, where a lack of training is often seen as a main barrier to developing rural tourism projects (Nursanti & Nurhayati, 2024).

Regarding the skills of women engaged in tourism in Hữu Liên, 62% of the respondents reported that their communication skills with visitors were at an average level, while 38% mentioned that their communication skills were weak. As for the skills in planning tourism development, 13% of those surveyed stated they lacked this aptitude, 75% assessed their skills as weak, and 12% rated them as average. In terms of online tourism marketing skills, 88% of respondents rated their skills as weak, while 12% said their skills were average.

**Figure 4:** Evaluation of the Skills of Women in Tourism in Hữu Liên



Source: Authors’ survey data (2023).

Based on focus group interviews and discussions with stakeholders, the main barriers hindering women in Hữu Liên from adopting digital transformation in community-based tourism can be categorized as follows:

*Firstly*, mindset and awareness: many women feel hesitant and lack confidence when engaging with new technologies. For instance, some older

participants shared that they were “shy about appearing on camera and did not dare to record videos” to promote their homestays, fearing ridicule or not knowing what to say. A fear of risk is also present - some worry that doing business online could lead to scams, financial losses, or exploitation. The absence of successful role models further weakens their motivation to experiment with new approaches.

*Secondly*, digital skills and knowledge: most women surveyed have not received formal training in digital skills. While they are proficient in using mobile phones for basic tasks (e.g. calling, texting), they do not know how to create engaging content (taking quality photos, editing videos), manage social media sales pages, or optimize service information on booking platforms. Their knowledge of e-commerce, digital payments, and information security is almost non-existent. In particular, language barriers make it difficult for many to navigate app interfaces or follow instructions written in English.

*Thirdly*, physical conditions and infrastructure: although the commune’s telecommunications infrastructure is gradually improving, significant disparities remain between areas. Many households lack computers and rely solely on old mobile phones, which have small screens and make complex tasks difficult to perform. The cost of mobile data is also a burden for some low-income women.

*Fourthly*, socio-cultural factors: gender roles and traditional customs strongly influence women’s participation. In many ethnic minority households, women are still expected to prioritize domestic work, childcare, and agriculture. “Women are already busy enough with the fields and the house”, remarked a local man, implying that the community is somewhat hesitant for women to branch out into new business areas. A lack of support from husbands or in-laws can discourage women from dedicating time to learning and applying technology. Furthermore, the close-knit nature of the community leads some older women to feel that online communication is “less genuine” than face-to-face interaction, resulting in lukewarm attitudes toward digital engagement.

These barriers are interconnected and mutually reinforcing. For example, poor infrastructure (such as outdated phones) limits opportunities for practice, which in turn exacerbates skill gaps and erodes confidence; gender norms restrict women’s learning opportunities, keeping their skill levels low and making it harder to adopt new digital tools; conversely, women’s lack of initiative in learning technology can make it difficult to convince their families to trust in their business ideas. Consequently, although women’s overall awareness of the potential benefits of digital transformation in tourism has increased (from television or observing other models) and their willingness to learn is high (100% expressed a desire to attend digital skills training), their actual behavior remains cautious. They tend to opt for safer solutions such as promoting their homestays by posting a few photos on personal Facebook pages or travel groups, and accepting cash or bank transfers upon guests’ arrival, rather than using newer applications such as e-wallets or

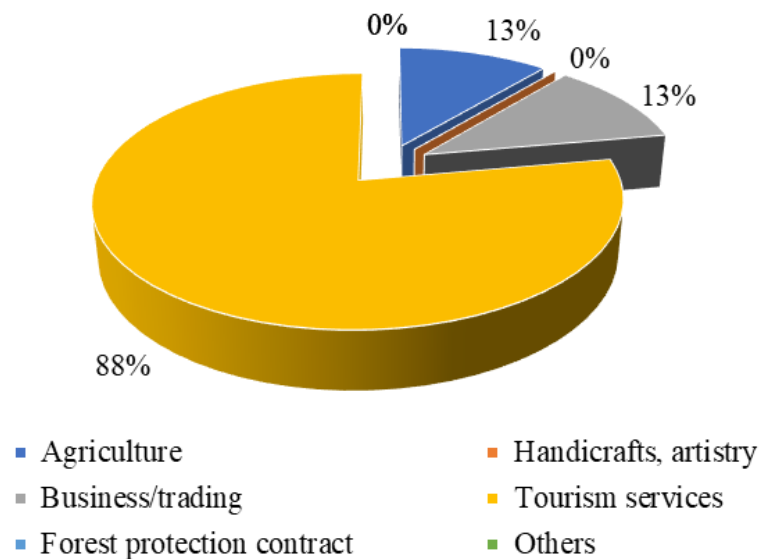
online booking platforms. They also tend to rely on regular customers or word-of-mouth referrals rather than proactively expanding their outreach.

Overall, ethnic minority women in Hữu Liên have begun to recognize the importance of digital technology for developing community-based tourism, but they are not yet mentally or technically prepared to fully leverage these tools.

## 5.2. The effectiveness of CBE and women's empowerment in Hữu Liên

In terms of livelihoods, 88% of women reported that tourism activities constitute their household's primary source of income, whereas 13% rely primarily on agriculture and another 13% on small-scale retail (such as market stalls and eateries).

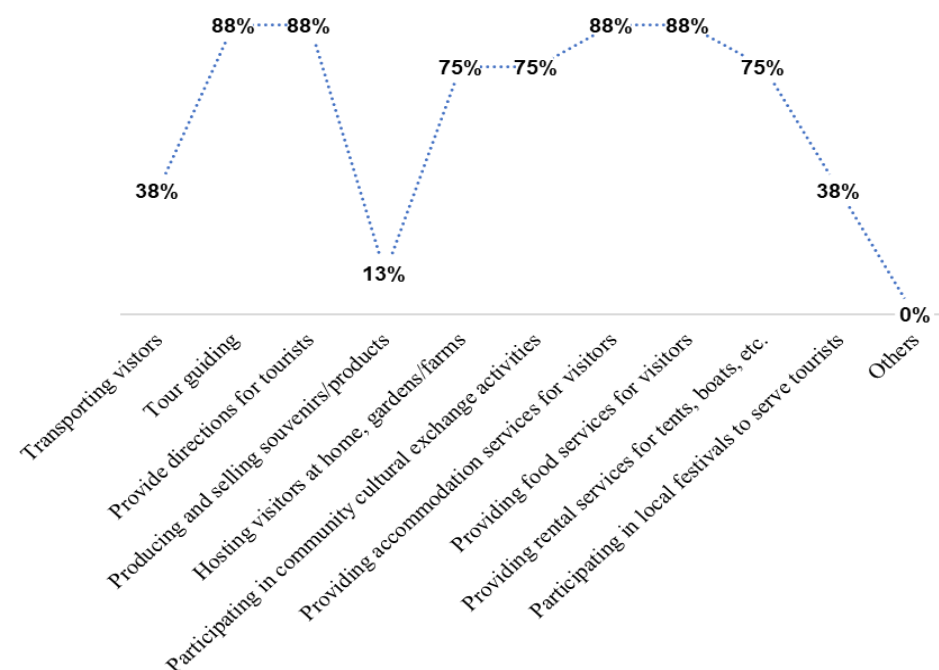
**Figure 5:** Income-generating Activities within the Family



*Source:* Authors' survey data (2023).

In practice, many blend activities, for example, 75-88% of respondents engage in multiple tourism services such as guest accommodation, guide services, and providing meals. Specifically, 88% provide guided tours, 88% offer accommodation, 88% serve food, and 75% welcome visitors at their farms or gardens. These patterns show that women dominate labor-intensive, community-based tourism tasks in Hữu Liên. This finding aligns with the existing literature suggesting that rural tourism in Vietnam often builds upon women's traditional roles in hospitality and handicrafts, thereby facilitating income generation (Long & Nguyen, 2018; Nguyen et al., 2022; Tran & Walter, 2014; Tran, 2022).

**Figure 6:** Tourism Services Provided by Respondents



*Source:* Authors' survey data (2023).

The survey and interviews assessed how tourism is currently affecting local livelihoods. Overall, the majority of women see positive economic impacts. 75% believe tourism “has a constructive impact on the economic and social life” of their families and communities. In particular, 88% reported that tourism has provided more job opportunities and additional income for their households. Moreover, 75% noted that tourism promotes the use of agricultural products (due to purchase by visitors), and 88% observed tangible improvements in physical infrastructure (such as roads, bridges) since tourism began. These responses indicate that even at an early stage, tourism is becoming a critical livelihood strategy, with 88% of respondents reporting that it is already their main source of income and that it visibly funds improvements benefiting the wider community, although many challenges are still acknowledged.

Social benefits were also highlighted. All respondents (100%) agreed that tourism has fostered cultural exchange with outsiders and served as an “important foundation for promoting greater women’s involvement in economic development”. One respondent explained “through meeting visitors, we learn new ideas, languages, and gain confidence in working with them”. This aligns with literature on tourism as a site of cross-cultural interaction that can broaden perspectives and networks for women (Elshaer et al. 2021). In practical terms, women reported that

engaging with visitors, has encouraged some to improve their conversational skills and creativity in crafts and cooking.

However, not all impacts are positive or evenly distributed. Notably, only 38% of respondents believe current tourism development contributes to resource preservation. In fact, 88% perceive significant environmental pressures from tourism. The main issue identified is solid waste, as inadequate waste collection systems and low environmental awareness have resulted in littering at scenic sites, with trash often left scattered around at visitor campsites. Additionally, respondents observed an alarming trend of homestay owners replacing traditional Tày stilt-house roofing with non-local materials to cater to visitor comfort. This development “erodes the cultural values” of Hữu Liên, as one elder lamented. These signs of cultural and ecological stress highlight a classic ecotourism paradox, where the very attractions that draw visitors, such as pristine forests and vernacular architecture, risk being undermined without careful management. Our findings confirm that although economic opportunities from tourism are highly valued, sustainability concerns remain significant and require greater attention.

Alongside its evident benefits, empowering women through community-based tourism development and digital transformation also entails certain consequences that merit consideration.

*Firstly*, an increased economic role may also bring a greater workload for women. In the case of Hữu Liên, women participating in tourism are still expected to fulfill their traditional family roles, leading to a “double burden” situation. This reflects the reality that inequality in labor division and gender stereotypes do not automatically disappear when women earn income, potentially resulting in women being overworked and experiencing greater stress.

*Secondly*, engaging in the online sphere exposes women to new business risks. A lack of understanding of cybersecurity and legal frameworks can make them vulnerable to financial scams or to public negative feedback (such as poor reviews on social media or unfounded complaints from online customers). In areas with lower educational levels, women may become targets of misinformation or misguided online advice, leading to poor business decision making. Reliance on digital platforms (Facebook, Agoda, Airbnb, etc.) also carries potential risks: if these platforms change their policies or algorithms, small-scale businesses may suffer significant drops in customer traffic. Therefore, market risks and technological risks are factors that women need to be equipped with knowledge to address.

*Thirdly*, an imbalance may arise between digital engagement and real-life connections. When women dedicate significant time and energy to online promotion and interaction, they may inadvertently reduce face-to-face interaction within their communities. Some younger women tend to be more attached to their

phones and the virtual world, participating less in traditional cultural activities or local community events. Over time, this could weaken social cohesion and threaten the preservation of traditions, especially given Hữu Liên's rich ethnic heritage. Moreover, "being online" can create lifestyle pressures: women may feel they must remain constantly connected to respond to guests and update content - a fast-paced rhythm that contrasts with the slower lifestyle of rural villages. The value conflict between the digital world (focused on image and instant feedback) and community values (centered on long-term relationships and patience) may, if not reconciled, cause psychological fatigue for women.

These consequences are not intended to diminish the positive significance of women's empowerment through digital tourism but rather to emphasize that the process must be implemented responsibly and sustainably. Specifically, programs supporting women in starting digital tourism businesses should be accompanied by efforts to encourage men to share household responsibilities, mechanisms to protect small entrepreneurs' online safety, and guidance on managing time between online work and family life. Only then can empowerment genuinely improve women's quality of life, rather than adding invisible burdens to their shoulders.

## **5. Conclusion and recommendations**

The study reveals that women play a central role in Hữu Liên's emerging ecotourism sector - running homestays, guiding tours, cooking for visitors, and producing handicrafts - making tourism the primary livelihood for most surveyed households. Participation in tourism has brought clear benefits: 88% of respondents reported increased income and job opportunities from CBE, along with improvements in local infrastructure. Socially, all participants agreed that tourism has broadened their horizons through cultural exchange, while enhancing women's confidence and engagement in economic development. These outcomes underscore tourism's potential to economically and psychologically empower rural women, aligning with broader evidence that tourism can foster women's entrepreneurship and skill development. However, women also identified persistent inequalities and sustainability risks. Only 38% believed that tourism contributes to resource conservation, while 88% observed mounting environmental pressures (particularly waste) and expressed concerns about cultural heritage - for instance, traditional stilt-house features being altered to meet tourist preferences.

Regarding digital capacity and transformation, the women of Hữu Liên are increasingly familiar with digital tools, yet their skills and application of these tools remain limited. All participants own smartphones and use the internet daily, with most spending more than two hours online each day. However, this connectivity has



not translated into genuine digital entrepreneurship. Internet use is primarily for social networking and information searching, while more advanced applications for tourism business purposes remain scarce. Nearly all women use Facebook or Zalo for personal communication, but fewer than 20% have attempted to promote their homestays or services online, and none have their own websites or engage in regular e-commerce. In practice, a “second-level digital divide” persists: despite having devices in hand, women are not yet leveraging digital tools for marketing, online sales, or content creation. Most still rely on face-to-face interactions, cash or bank transfers, and word-of-mouth referrals instead of online booking systems. In other words, digital engagement remains at a surface level - centered on consumption and basic communication - rather than creating new business opportunities. This gap reflects underdeveloped digital capacities: the majority of women rated their online marketing and tourism planning skills as “weak.” They identified internal constraints - lack of knowledge, limited marketing skills, and inability to build a local brand - as the primary barriers holding back CBE, outweighing external factors such as infrastructure or market access.

Qualitative findings reinforce this picture: women reported a lack of confidence and hesitation in using new technologies, with very limited formal training in digital skills (few know how to create engaging online content or operate on e-commerce platforms). They also face practical obstacles such as unstable internet connection, outdated devices, and high data costs. Deeply rooted socio-cultural norms further contribute to the challenge: traditional gender roles and heavy domestic workloads limit the time and support women can devote to digital activities, while some community members perceive online interactions as less “authentic,” dampening enthusiasm for digital engagement. These barriers are interconnected and mutually reinforcing: poor connectivity and low educational attainment exacerbate skills gaps, which in turn erode confidence; entrenched gender norms restrict learning opportunities, thereby deepening the digital gender divide.

Nevertheless, a positive sign is that women recognize the potential of digital tools for tourism and express a strong willingness to learn, with 100% of respondents ready to participate in digital skills training. However, the current reality remains one of cautious adoption - women favor “safe” and familiar methods (posting a few photos on Facebook, accepting cash payments) rather than fully embracing newer tools such as e-wallets or online booking platforms. In short, Hữu Liên’s ethnic minority women stand at the threshold of digital entrepreneurship - fully aware of its potential but not yet adequately equipped or confident enough to seize it.

These findings have broader implications for digital inclusion, sustainable rural development, and global goals on women’s empowerment. The case of Hữu Liên illustrates that CBE can be a pathway for rural development and gender empowerment - but only if women are provided with the tools and support to

participate fully in the digital economy. Closing the rural digital gender gap is not merely a technical upgrade; it is a development imperative. Without targeted interventions, the shift toward digital tourism services could deepen inequalities, pushing ethnic minority women to the margins as tourism markets modernize. Conversely, with adequate training, infrastructure, and encouragement, digital technology can amplify the benefits of CBE by expanding market access and improving efficiency, contributing to the realization of SDG 5.B - leveraging ICT to empower women.

The Hữu Liên experience underscores that digital inclusion must go hand in hand with gender-inclusive tourism governance and sustainable practices. Women's voices should be integrated into tourism planning and decision-making to ensure growth is inclusive and responsive to community needs, such as waste management and cultural preservation. Similarly, efforts to promote rural digital entrepreneurship must be culturally sensitive and community-driven, respecting local values and social dynamics. Linking CBE with digital transformation offers a synergistic opportunity to advance multiple development goals - from poverty reduction and gender equality to conservation - but it requires an integrated approach that balances economic gains with social and environmental sustainability.

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