Current Issues in Tourism

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/rcit20

Intention to engage in ecotourism development: validation and extension of the Resident Empowerment through Tourism Scale (Version 2.1)

Danny Castillo-Vizuete, Alex Gavilanes-Montoya, Kyle Maurice Woosnam, Manuel Alector Ribeiro, Carlos Chávez-Velásquez, Fausto O. Sarmiento & Chadley R. Hollas

To cite this article: Danny Castillo-Vizuete, Alex Gavilanes-Montoya, Kyle Maurice Woosnam, Manuel Alector Ribeiro, Carlos Chávez-Velásquez, Fausto O. Sarmiento & Chadley R. Hollas (25 Apr 2024): Intention to engage in ecotourism development: validation and extension of the Resident Empowerment through Tourism Scale (Version 2.1), Current Issues in Tourism, DOI: 10.1080/13683500.2024.2343777

To link to this article: https://doi.org/10.1080/13683500.2024.2343777

View supplementary material

Published online: 25 Apr 2024.

Submit your article to this journal

Article views: 167

View related articles

View Crossmark data

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=rcit20

CURRENT ISSUES IN TOURISM
https://doi.org/10.1080/13683500.2024.2343777

Routledge
Taylor & Francis Group

RESEARCH ARTICLE

Check for updates

Intention to engage in ecotourism development: validation and extension of the Resident Empowerment through Tourism Scale (Version 2.1)

Danny Castillo-Vizuete[a], Alex Gavilanes-Montoya[a], Kyle Maurice Woosnam[c,d,e], Manuel Alector Ribeiro[d,f,g], Carlos Chávez-Velásquez[h], Fausto O. Sarmiento[i] and Chadley R. Hollas[j]

[a]Tourism and Natural Resources Faculty, Escuela Superior Politécnica de Chimborazo, Riobamba, Ecuador; [c]Parks, Recreation and Tourism Management, University of Georgia, Athens, GA, USA; [d]School of Tourism and Hospitality, University of Johannesburg, Auckland Park, South Africa; [e]School of Hospitality, Tourism and Events, Centre for Research and Innovation in Tourism (CRiT), Taylor's University, Selangor, Malaysia; [f]School of Hospitality and Tourism Management, University of Surrey, Guildford, UK; [g]Research Centre for Tourism, Sustainability, and Wellbeing (CinTurs), University do Algarve, Faculty of Economics, Campus de Gambelas, Faro, Portugal; [h]Tourism and Natural Resources Faculty, Escuela Superior Politécnica de Chimborazo, Riobamba, Ecuador; [i]Department of Geography, University of Georgia, Athens, GA, USA; [j]Parks, Recreation and Tourism Management, University of Georgia, Athens, GA, USA

ABSTRACT

This work, based on the conceptual work by Scheyvens and van der Watt (2021), amends the original *Resident Empowerment through Tourism Scale* (RETS) by including three new dimensions: economic empowerment, cultural empowerment, and environmental empowerment. In so doing, the modified scale is applied in a region of Ecuador not known for its ecotourism opportunities, to determine how residents' ($n = 500$) perceived empowerment factors into their intent to engage in ecotourism endeavours through a modified theory of planned behaviour model. Psychometric properties of the 13-item modified RETS were strong. Six of the nine proposed hypotheses were supported via structural equation modelling using IBM Amos 28.0. The first-order model (of perceived empowerment) accounted for 33% of the variance in attitudes about engaging in ecotourism and 82% of the variance in behavioural intentions to engage in ecotourism. A second-order model increased variance explained in attitudes to 70% and in behavioural intentions to 89%.

ARTICLE HISTORY
Received 30 June 2023
Accepted 10 April 2024

KEYWORDS
Economic empowerment; cultural empowerment; environmental empowerment; theory of planned behaviour; ecotourism; Ecuador

Introduction

Notwithstanding recent criticisms of empowerment within the context of tourism (Abdullah et al., 2023), research on the construct and its complex processes remains popular among academics, especially when considering residents in rural destinations who may be disadvantaged or marginalised (Aghazamani & Hunt, 2017). Such popularity has been further exemplified in recent works surrounding topics of gender (Abou-Shouk et al., 2021), political issues (Joo et al., 2020), community development (Dolezal & Novelli, 2022), etc. The diversity of empowerment research further extends into various forms of tourism (i.e. adventure, cultural, community-based, heritage, sustainable, etc.), with a considerable degree undertaken in the context of ecotourism (see Lenao & Basupi,

CONTACT Kyle Maurice Woosnam woosnam@uga.edu
Supplemental data for this article can be accessed online at https://doi.org/10.1080/13683500.2024.2343777.
This article has been corrected with minor changes. These changes do not impact the academic content of the article.
© 2024 Informa UK Limited, trading as Taylor & Francis Group

2016; Mendoza-Ramos & Prideaux, 2018; Ramos & Prideaux, 2014; Ramón-Hidalgo & Harris, 2018). As Shafieisabet and Haratifard (2020) claim, the notion of empowerment as it relates to ecotourism is intuitive given many individuals living in and around ecotourism destinations reside in rural areas with finite employment opportunities.

One popular measure by which researchers have ascertained such rural residents' perceived levels of empowerment is the *Resident Empowerment through Tourism Scale* (RETS) (Boley & McGehee, 2014). The RETS was primarily developed from the seminal works by Scheyvens (1999; 2000) – in fact, in ecotourism. Three distinct dimensions are highlighted within the RETS (i.e. psychological, social, and political). Notably missing from the RETS was economic empowerment which Scheyvens advanced in her first two works. This exclusion was recently addressed by Moreira dos Santos et al. (2024) to add economic empowerment to the initial RETS. Years have passed since the creation of the RETS, with numerous academics perpetuating its utilisation (Aleshinloye et al., 2021; Elshaer et al., 2021; Joo et al., 2020; Strzelecka et al., 2017a; 2017b; 2023). Fast-forward nearly ten years since the validation of the RETS, through works focused on the nexus of culture, the natural environment, and empowerment (Shafieisabet & Haratifard, 2020; Su et al., 2023; Wu & Chen, 2018), and Scheyvens and van der Watt (2021) advanced a conceptual paper calling for a more robust conceptualisation of perceived empowerment that encompasses not only the three dimensions of the RETS but also economic, cultural, and environmental empowerment. Such work showcases Scheyvens continued commitment to advancing empowerment research, offers examples of how to operationalise items within each of the six distinct dimensions, and provides fertile ground to amend the RETS – assessing its psychometric properties and examine its utility in return to its ecotourism roots, to ultimately determine its role in explaining residents' behavioural intent to engage in ecotourism (through the theory of planned behaviour). Though the work by Boley and colleagues (see Boley et al., 2014; 2018; Maruyama et al., 2017a; Moreira dos Santos et al. (2024); Strzelecka et al., 2017b; 2023) provides evidence of the connection between three perceived empowerment dimensions to residents' attitudes about tourism, their work neglects determining how such connection can pave the way for individuals' intentions to engage in ecotourism. Moreira dos Santos et al. (2024) came close in assessing how empowerment (albeit only using the existing three dimensions and their newly developed economic and environmental dimensions) can explain residents' support for sustainable tourism, but this is not the same as willingness to engage in ecotourism. The theory of planned behaviour framework provides this link, which Ulker-Demirel and Ciftci (2020) assert is largely missing from the residents' attitudes literature over the last 30 years.

Few places are more ideal than Ecuador for ecotourism (especially within Latin America) – with the Galapagos Island off the western coast and the Amazon rainforest and headwaters inland to the east. One region not as well known for its ecotourism is within the central portion of the country including the Andes Mountains with more than 20 peaks at least 14,000 feet above sea level (4200 metres) in elevation. Chimborazo, the highest peak in the region measured at 20,702 feet above sea level (6310 metres), is considered the furthest point from the centre of the Earth (NOAA, 2023). As Ecuador rebounds from the COVID-19 pandemic, its Ministry of Tourism, at the end of January 2022 developed a new strategy to attract ecotourists – with the region including Chimborazo playing a central role in reaching 2 million visitors by 2025 (González Lara, 2022). Given the relative novelty of ecotourism in the region, little is known about residents' intent to engage in ecotourism endeavours and if perceived empowerment from tourism in general may play a role in such intentions.

This research has two primary aims. The first of which is to operationalise Scheyvens and van der Watt (2021) six dimensions of residents' perceived empowerment (i.e. psychological, sociological, political, cultural, economic, and environmental empowerment) from tourism, utilise the scale in data collection, and examine the psychometric properties of the amended RETS. The second aim is to examine the role of the amended RETS within a theory of planned behaviour model to determine if the six dimensions significantly contribute to residents' attitudes about engaging in ecotourism services (which would ultimately explain their behavioural intent to engage in ecotourism). This

second aim serves to examine the predictive validity of the amended RETS dimensions as previous work (Boley et al., 2014; 2018; Maruyama et al., 2017a; Strzelecka et al., 2017b; 2023; Wang & Han, 2022) has connected three dimensions of the original RETS (along with economic and environmental added by Moreira dos Santos et al., 2024) to attitudinal tourism support (yet stopped shy of determining how such attitudes, perceived behavioural control, and subjective norms may explain behavioural intentions to engage in ecotourism). In essence, assessing the relationship between perceived empowerment from tourism in general and residents' perspectives of engaging in ecotourism specifically plays an integral role in helping the Ministry Tourism realise their campaign to attract 2 million ecotourists within such a short period of time. If residents' have minimal desire to engage in the provision of ecotourism services, this will stand counter to the notions of ecotourism, especially in achieving UNESCO's Sustainable Development Goal 11: *Sustainable Cities and Communities* (Spenceley & Rylance, 2021) – that small business development and employees may have to come from outside the region.

Literature review and hypothesis development

Nearly 25 years in the making, tourism scholars are entrenched in empowerment research, namely, to determine if and to what extent community residents are empowered from tourism (Scheyvens & van der Watt, 2021). Though a singular definition of empowerment is not widely accepted (Rappaport, 1984; Scheyvens, 1999; 2000; Sofield, 2003), Scheyvens (2020) offers one:

> Empowerment is understood as the activation of the confidence and capabilities of previously disadvantaged or disenfranchised individuals or groups so that they can exert greater control over their lives, challenge unequal power relations, mobilize resources to meet their needs, and work to achieve social justice. (p. 115)

The seminal works by Scheyvens on perceived empowerment in ecotourism truly stimulated this area of research. Though tourism researchers have branched out to apply notions of empowerment in other areas of tourism such as cultural and heritage tourism (Su et al., 2023), community-based tourism (Dolezal & Novelli, 2022; Nguyen et al., 2022), and sustainable tourism in general (Elshaer et al., 2021; Joo et al., 2020; Sofield, 2003), it is still largely utilised within work on ecotourism (Lenao & Basupi, 2016; Mendoza-Ramos & Prideaux, 2018; Ramos & Prideaux, 2014; Ramón-Hidalgo & Harris, 2018) – many of which are situated at the nexus of gender and empowerment.

RETS and its application

Just as definitions of empowerment are plentiful, so too, are the ways in which the construct has been conceptualised and operationalised within tourism literature. This prompted Boley and McGehee's (2014) development of the 12-item *Residents' Empowerment through Tourism Scale* (or RETS), with its three dimensions – psychological, social, and political empowerment. Apart from Strzelecka et al. (2017a), perceived empowerment (and its dimensions) has primarily served as a predictor of some other variable, most regularly, attitudes about tourism or support for tourism (Boley et al., 2014; 2018; Maruyama et al., 2017a; Strzelecka et al., 2017b; 2023; Wang & Han, 2022). Only twice (see Aleshinloye et al., 2021; Joo et al., 2020) has perceived empowerment been considered a precursor to attitudes concerning engaging with tourism (not simply supporting the industry). Two primary takeaways from this body of work on RETS are that: (1) psychological and social empowerment have consistently been the best predictors of attitudes about and support for tourism, and (2) minimal work (see Strzelecka et al., 2023 in context of rural nature tourism) has utilised the RETS in the context of ecotourism – where Scheyvens (1999; 2000) first introduced the construct.

Scheyvens and van der Watt (2021) argue that through their *empowerment and sustainable development framework*, future work should incorporate additional aspects of cultural, economic, and environmental empowerment, as they operationalise each of the six dimensions with proposed wording (Appendix A). Answering this call, our work employs many of the proposed items advanced

by Scheyvens and van der Watt (2021) to test a six-dimensional RETS (i.e. psychological, social, political, cultural, economic, and environmental). The justification for those used was based on (1) knowledge of the study context, (2) knowledge of the extant literature concerning perceived empowerment within tourism, and (3) critical consideration of wording proposed by Scheyvens and van der Watt. In so doing, psychometric properties will be examined, including nomological validity just as Boley and McGehee (2014) considered when they developed the initial RETS and Moreira dos Santos et al. (2024) have recently done within their amended model. Given that we know perceived empowerment has significantly explained residents' attitudes about tourism in general (albeit with different dimensions serving as significant predictors), we argue that perceived empowerment (through the six dimensions we propose) should also explain attitudes about ecotourism, in particular. This will allow us the opportunity to consider how residents' perceptions of empowerment through tourism will ultimately explain their behavioural intentions to engage in ecotourism (through attitudes, perceived behavioural control, and subjective norms) using the theory of planned behaviour (TPB). As it stands, only a few studies have connected empowerment to residents' involvement or engagement in tourism (see Elshaer et al., 2021; Shafieisabet & Haratifard, 2020; and Wu & Chen, 2018) for which the TPB would have been ideal. In essence, this would extend the connection between residents' perceived empowerment and attitudes about tourism (Boley et al., 2014; 2018; Maruyama et al., 2017a; Strzelecka et al., 2017b; 2023) to something more actionable (i.e. intentions to engage in ecotourism).

Theory of planned behaviour and residents

The theory of planned behaviour (TPB) purports that attitudes, subjective norms, and perceived behavioural control concerning a particular behaviour each contribute to an individual's intent to behave, which ultimately explains their actual behaviour. Since its inception, the theory has been applied in countless contexts such as organisational behaviour (Ajzen, 1991), health promotion (Godin & Kok, 1996), and hospitality and tourism (Erul et al., 2020) to name a few. To date, many works within tourism (see Ulker-Demirel & Ciftci, 2020) focus on behavioural intent given the widely accepted cross-sectional nature of survey-based research, owing to the difficulty of ascertaining behavioural outcomes unless undertaking longitudinal research using the same sample of participants (Garay et al., 2019; Qiu et al., 2022). Given the novelty of ecotourism among residents of our study site and their engagement in this special form of tourism, our work focuses exclusively on behavioural intentions to engage in ecotourism.

Despite its widespread use within the tourism literature, Hadinejad et al. (2019), in their review of 90 articles focusing on residents' attitudes about tourism between 2011 and 2017 (in four leading tourism journals), reported that no study employed the theory of planned behaviour. Somewhat similar findings were reported by Ulker-Demirel and Ciftci (2020) in their systematic literature review of the theory of planned behaviour within the tourism literature – none of the 259 studies reviewed from 1991 to 2019 used the TPB in linking residents' attitudes with behavioural intentions to support tourism. Since these two reviews were published, however, a few studies have made the connection considering TPB. Erul et al. (2020) and Erul and Woosnam (2022) demonstrated that among residents of Izmir (Turkey), attitudinal support for tourism was a highly significant predictor of behavioural intent to support or engage with (as more aptly reflected within the items used) the industry. Such findings were echoed in similar research involving Chinese residents (Shen et al., 2019; Shen & Shen, 2021).

Of the works employing the TPB among destination residents from 2020, some key observations can be made. Less than half of those examined revealed that the primary antecedents to behavioural intentions (i.e. attitudes, subjective norms, and perceived behavioural control) were all significant in a single study (Cahigas et al., 2023; Erul et al., 2020; Erul & Woosnam, 2022; Wong et al., 2022). Most often, attitudes were the best predictor (reflected through regression coefficients) and subjective norms were the worst predictor of behavioural intentions (Erul et al., 2020; Shen & Shen, 2021; Wang et al., 2022; Wong et al., 2022; Xu et al., 2022). Further, no studies that we came across used a modified TPB to link residents'

perceived empowerment through tourism and their behavioural intent to engage in the industry (i.e. cooperation with tourism planning and development initiatives, involvement in tourism business training, participation in community efforts to beautify the area and repair infrastructure, etc.). That said, we are in even more 'uncharted waters' when it comes to the niche area of ecotourism. On the basis of the amended RETS exhibiting strong psychometric properties, and statistical support connecting perceived empowerment to attitudes concerning tourism (Boley et al., 2014; 2018; Maruyama et al., 2017a; Strzelecka et al., 2017b; 2023; Wang & Han, 2022), along with evidence that attitudes, subjective norms, and perceived behavioural control are significant contributors to behavioural intentions (Cahigas et al., 2023; Erul et al., 2020; Erul & Woosnam, 2022; Wong et al., 2022), we propose the following four primary hypotheses:

$H_{1a\text{-}f}$: Residents' (a) psychological, (b) social, (c) political, (d) cultural, (e) economic, (f) environmental empowerment will significantly predict their attitudes about ecotourism.

H_2: Residents' attitudes about ecotourism will significantly predict their behavioural intent to engage in ecotourism.

H_3: Residents' subjective norms about engaging in the provision of ecotourism will significantly predict their behavioural intent to engage in ecotourism.

H_4: Residents' perceived behavioural control regarding engagement in the provision of ecotourism will significantly predict their behavioural intent to engage in ecotourism.

Methods

Study context

Our work was undertaken in the urban and rural areas of Riobamba Canton, Ecuador. Riobamba is one of the ten cantons of the Chimborazo Province, located at an altitude of 2754 masl (metres above sea level) in the centre of the Inter-Andean region of the country (Cevallos et al., 2022). This canton is surrounded by several volcanoes such as Chimborazo, Tungurahua, Altar, and Carihuairazo (Carrión-Mero et al., 2021), and part of its territory is in protected natural areas such as the Chimborazo Natural Reserve and the Sangay National Park (Vizuete et al., 2021; Vizuete et al., 2023). Riobamba has five urban parishes: Veloz, Velasco, Maldonado, Lizarzaburu, and Yaruquies; it also has 11 rural parishes: Licán, Calpi, San Juan, Cubíjíes, Quimiag, Cacha, San Luis, Punín, Licto, Flores, and Pungalá (GADMR, 2020) (Figure 1). The primary economic activities of Riobamba Canton are trade in the urban sector and agricultural production in the rural sector (GADPCH, 2020). The total population of the canton is 225,741 inhabitants, of which 64.8% (146,324) are in urban areas, while 35.2% (79,417) are in rural areas (GADMR, 2020).

Sampling and data collection

Survey data were collected from Riobamba Canton residents of the urban and rural sectors between May and August of 2022. It should be noted that most urban residents (who identify as Mestizo) speak Spanish as their primary language, whereas most rural residents (who identify as indigenous) speak Quechua. Capturing perspectives of both groups is important to better represent residents of the Riobamba Canton. A probabilistic formula with a confidence level of 95% was used to determine the sample size. This formula is based on statistical theory and considers the total population to be studied, the desired level of confidence and the acceptable margin of error (Gogate & Domingos, 2012). It was established that 325 and 175 questionnaires were needed for urban and rural residents respectively (excluding those under 18 years of age), who represented 70% of the total population (Appendix B).

Prior to data collection, the intelligibility of the questionnaire was validated using a pilot study of 100 residents of the Riobamba canton. Then the questionnaire was administered (i.e. dictating each question in Spanish for urban residents and in Quechua for rural residents) on-site at residents'

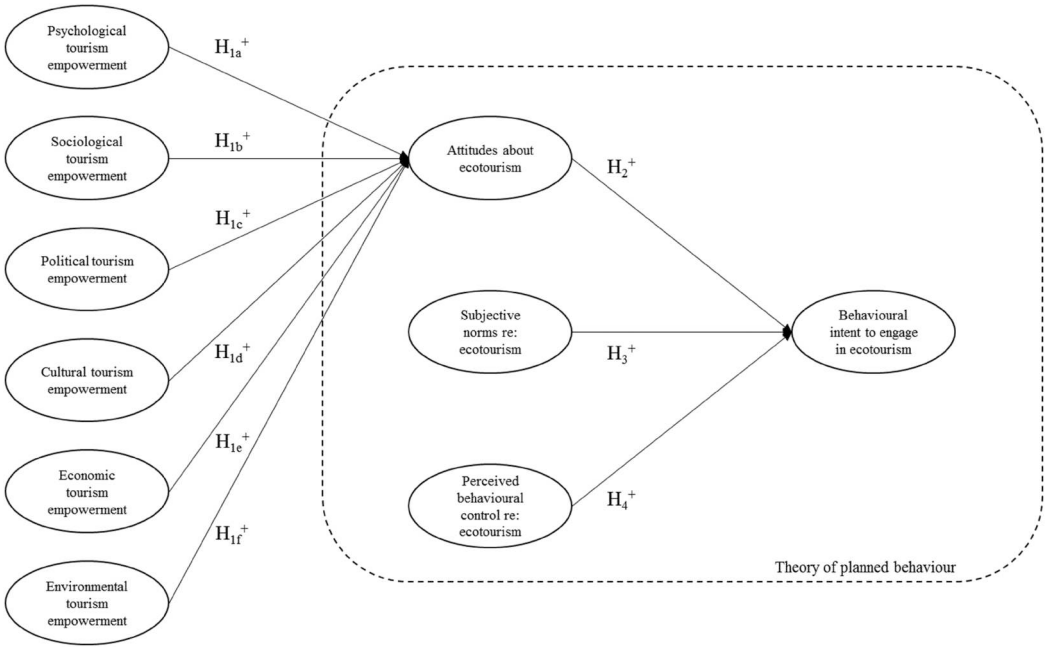

Figure 1. Map of the study area. (a) Location of the Riobamba canton in the province of Chimborazo, Ecuador; (b) Location of the rural parishes and the urban sector of the Riobamba canton.

homes by a member of the 11-person research team from the Escuela Superior Politécnica de Chimborazo. The advantage of this method is the possibility of clarifying any doubts respondents may have about the questions and obtaining more precise and complete answers. Seven hundred homes were visited, with 100 individuals declining to participate. At another 50 homes, no one over the age of 18 was able to participate. In total, 550 questionnaires were collected. Upon closer inspection, 54 questionnaires were incomplete and excluded from study analysis, yielding a final sample size of 496 (i.e. 368 from urban residents; 128 from rural residents).

Construct measurement

Five constructs were included within the theoretical model. Residents' perceived empowerment from tourism was operationalised as 13 items from the work of Scheyvens and van der Watt (2021) into six distinct dimensions – economic, psychological, sociological, cultural, political, and environmental. Attitudes about ecotourism were measured using three items adapted from Wu and Chen (2018). Subjective norms regarding engagement in ecotourism were operationalised through three items also adapted from Wu and Chen (2018). Five items further adapted from Wu and Chen (2018) were used to measure perceived behavioural control regarding the engagement in ecotourism. Finally, four items were operationalised and adapted from the works of Elshaer et al. (2021), Wu and Chen (2018), and Shafieisabet and Haratifard (2020) to measure residents' behavioural intent to engage in ecotourism. Each scale item was presented using a 5-point Likert scale of agreement. Respondents were also asked to reply to demographic questions. The questionnaire was presented in Spanish; the lead authors are bilingual in English and Spanish which aided in translation and back translation.

Data analysis

The study utilised covariance-based structural equation modelling (CB-SEM) for data analysis, selected based on sample size and adherence to multivariate analysis assumptions. The analysis involved three

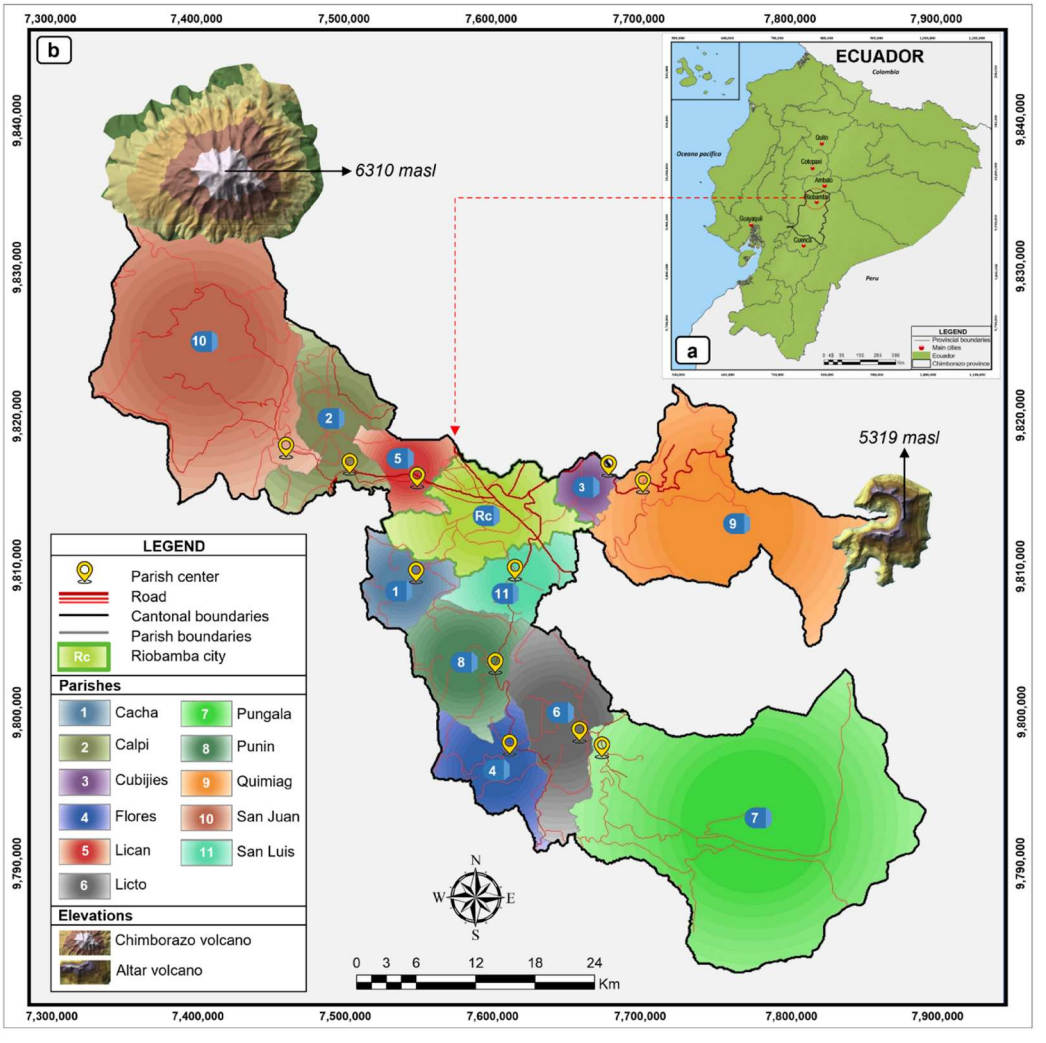

Figure 2. Proposed conceptual model.

phases. Firstly, the dataset was divided into two sets, each with 243 and 253 respondents, to ensure normality. Secondly, the new RETS scale underwent confirmatory factor analysis (CFA) to assess validity and reliability. The third phase utilised the second dataset, employing Anderson and Gerbing's (1988) two-step approach via CFA to evaluate RETS, TPB dimensions, and behavioural intention. This phase examined the constructs' reliability and validity, while SEM was used to assess predictive validity of the six RETS dimensions and test the proposed relationships within Figure 2.

Results

Sample demographics

The sample was comprised of slightly more women (51.4%) respondents, with an average 35 years of age. Most identified as mestizo (73.6%); the remaining identified as indigenous. In terms of education, almost three of four respondents (73.8%) reported either an elementary or high school education level. Most indicated they were self-employed (55.4%), followed by unemployed (11.4%),

government sector employed (10.8%), student (10.6%), private sector employed (10.4%), and retired (1.4%). Finally, the average length of residency among respondents was 34 years.

New RETS validation

To address the first aim of this paper, the dataset was split nearly in half, following the work by Thyne et al. (2022) as recommended by Hurley et al. (1997). This allowed for the opportunity to examine the psychometric structure of the 13 items adopted from Scheyvens and van der Watt (2021) through CFA using IBM Amos 28.0 (Table 1). Normality was checked through kurtosis and skewness, indicating no outlying issues. The six dimensions exhibited acceptable internal consistency with composite reliabilities (CR) ranging from 0.78 to 0.98, without removing any of the items from the model ($\chi^2_{(50)} = 49.20$, $p > 0.05$, RMSEA = 0.01, SRMR = 0.03, TLI = 0.97, CFI = 0.99). Each item had a standardised factor loading greater than 0.70, which is adequate (Hair et al.,2018). Finally, observed *t*-values for each item were significant (i.e. more than the critical *t*-value of 3.84). These three indicators (i.e. CR, standardised factor loadings, and significant t-values) provide evidence of convergent validity among the dimensions (Sharma et al., 2022). Further (as seen in Table 2), AVEs for each dimension were greater than the Fornell-Larcker criterion, demonstrating discriminant validity.

Theoretical model examination

Measurement model. With the remaining 253 cases, we set out to undertake a two-step CFA-SEM analysis. However, before this, we checked kurtosis and skewness estimates to ensure that our data were normally distributed. At this point, all six dimensions of the amended RETS were added into the CFA along with the four theory of planned behaviour constructs. The measurement model demonstrated adequate fit ($\chi^2_{(271)} = 557.68$, $p < 0.001$, $\chi^2/df = 2.06$, RMSEA = 0.07, SRMR = 0.08, TLI = 0.92, CFI = 0.94). As shown in Table 3, CR ranged from 0.77 to 0.99. Nearly all standardised factor loadings were larger than 0.70; three were greater than 0.50. As Hair et al. (2018) claim, loadings greater than 0.50 are deemed acceptable. Observed *t*-values for each item were significant (i.e. more than the critical *t*-value of 3.84). Once more, strong CR and standardised factor loadings, along

Table 1. CFA measurement model scale property results for six perceived empowerment dimensions ($n = 243$).

Dimensions/Items	β	*t*-value	CR	AVE
Economic tourism empowerment (EconTE)			0.894	0.809
Tourism brings lasting economic gains to my household.	0.898	17.284		
Those from marginalised backgrounds have opportunities to gain senior positions in the tourism sector or run their own tourism-related business.	0.901	16.850		
Psychological tourism empowerment (PsyTE)			0.813	0.687
Increased earnings from tourism employment improves my self-esteem.	0.904	10.635		
Training opportunities in tourism enhances my self-confidence.	0.746	8.176		
Sociological tourism empowerment (SocTE)			0.983	0.966
Tourism supports networks that bring together people from different backgrounds.	0.989	109.152		
Tourism contributes to creating places, infrastructure and services that benefit all local residents.	0.965	49.018		
Cultural tourism empowerment (CulTE)			0.939	0.884
Customs, languages, values, and cultural sites are valued and respected by tourism businesses and residents.	0.966	19.736		
Tourism businesses allow indigenous groups ability to self-represent their culture.	0.914	25.787		
Political tourism empowerment (PolTE)			0.782	0.642
Tourism planners provide me with opportunities to be involved in decision making.	0.810	9.504		
I have an outlet to share my concerns about tourism.	0.792	12.461		
Environmental tourism empowerment (EnvTE)			0.961	0.892
I have an enhanced awareness of intrinsic value of natural environment because of tourism.	0.922	37.059		
I am willing to avoid environmental degradation because of tourism.	0.915	42.411		
Tourism businesses take the lead in implementing sustainable practices.	0.995	341.407		

Note: $\chi^2_{(50)} = 49.20$, $p > 0.05$, $\chi^2/df = 0.0984$, RMSEA = 0.01, SRMR = 0.03, TLI = 0.97, CFI = 0.99.

Table 2. Discriminant validity: Fornell and Larcker criterion.

	EconTE	PsyTE	SocTE	CulTE	PolTE	EnvTE
EconTE	**0.899**					
PsyTE	0.121	**0.830**				
SocTE	0.269	0.090	**0.983**			
CulTE	0.225	0.192	0.178	**0.940**		
PolTE	0.225	0.253	0.226	0.341	**0.801**	
EnvTE	0.365	0.032	0.325	0.387	0.309	**0.944**

Note: The bold diagonal elements are the square root of AVE; The values below the diagonal are the Fornell-Larcker criterion.

with significant *t*-values provide evidence of convergent validity among the dimensions (Sharma et al., 2022). Further (as seen in Table 4), AVEs for each dimension were greater than the Fornell-Larcker criterion, demonstrating discriminant validity.

Structural model

In this section, we analysed the first-order structural paths of the hypothesised model. The overall fit statistics showed that the model fits the data well ($\chi^2_{(284)} = 692.637$, $p < 0.001$, $\chi^2/df = 2.14$, RMSEA =

Table 3. CFA measurement model results ($n = 253$).

Dimensions/Items	β	CR	AVE
Economic tourism empowerment (EcoTE)		0.955	0.914
Tourism brings lasting economic gains to my household.	0.955		
Those from marginalised backgrounds have opportunities to gain senior positions in the tourism sector or run their own tourism-related business.	0.956		
Psychological tourism empowerment (PsyTE)		0.948	0.901
Increased earnings from tourism employment improves my self-esteem.	0.974		
Training opportunities in tourism enhances my self-confidence.	0.924		
Sociological tourism empowerment (SocTE)		0.988	0.975
Tourism supports networks that bring together people from different backgrounds.	0.989		
Tourism contributes to creating places, infrastructure and services benefitting all residents.	0.986		
Cultural tourism empowerment (CulTE)		0.965	0.932
Customs, languages, values, and cultural sites are valued and respected by tourism businesses and residents.	0.968		
Tourism businesses allow indigenous groups ability to self-represent their culture.	0.963		
Political tourism empowerment (PolTE)		0.941	0.889
Tourism planners provide me with opportunities to be involved in decision making.	0.926		
I have an outlet to share my concerns about tourism.	0.959		
Environmental tourism empowerment (EnvTE)		0.986	0.959
I have an enhanced awareness of intrinsic value of natural environment because of tourism.	0.987		
I am willing to avoid environmental degradation because of tourism.	0.975		
Tourism businesses take the lead in implementing sustainable practices.	0.985		
Attitudes about ecotourism (ATT)		0.801	0.574
Ecotourism promotion can enhance my understanding of the natural environment.	0.791		
Promotion of ecotourism can allow me to join in environmental protection work.	0.688		
Ecotourism developments should effectively control the number of visitors.	0.790		
Subjective norms (SBN)		0.774	0.538
I would be influenced by my fellow neighbours to participate in ecotourism work.	0.590		
I would be influenced by civil organisations to participate in ecotourism work.	0.771		
Visitors' recreational behaviours would persuade me to join in ecotourism work.	0.820		
Perceived behavioural control (PBC)		0.860	0.552
I have the capacity to work or promote the works of the local ecotourism industry.	0.748		
I have the talent to perform the work of environmental interpretations well.	0.754		
I have the skills to perform the work of environmental conservation well.	0.798		
I could handle local natural resources to build an ecological community.	0.692		
I could obtain external resources from non-governmental or governmental organisations to help community developments.	0.720		
Behavioural intention to engage in ecotourism (BIEE)		0.867	0.621
I would like to participate in the development of community-based ecotourism initiatives.	0.819		
I would like to cooperate with ecotourism planning and development initiatives.	0.802		
I would like to contribute my labour for repairing community infrastructure to attract ecotourists.	0.813		
I would like to participate in ecotourism business training.	0.712		

$\chi^2_{(271)} = 557.68$, $p < 0.001$, $\chi^2/df = 2.06$, RMSEA = 0.07, SRMR = 0.08, TLI = 0.92, CFI = 0.94.

Table 4. Discriminant validity: Fornell and Larcker and HTHM criteria.

	ATT	CulTE	EconTE	EnvTE	BIEE	PBC	PolTE	PsyTE	SBN	SocTE
ATT	**0.76**	0.35	0.45	0.37	0.23	0.21	0.31	0.15	0.71	0.48
CulTE	0.28	**0.97**	0.36	0.36	0.09	0.19	0.32	0.18	0.10	0.28
EconTE	0.35	0.33	**0.96**	0.33	0.11	0.16	0.22	0.18	0.21	0.36
EnvTE	0.30	0.34	0.31	**0.98**	0.23	0.22	0.18	0.12	0.20	0.38
BIEE	0.00	−0.01	−0.04	−0.20	**0.79**	0.72	0.17	0.16	0.82	0.13
PBC	0.02	0.05	−0.05	−0.07	0.60	**0.74**	0.19	0.23	0.49	0.15
PolTE	0.23	0.29	0.19	0.17	0.12	0.12	**0.94**	0.36	0.21	0.28
PsyTE	0.12	0.17	0.16	0.11	0.14	0.18	0.33	**0.95**	0.21	0.07
SBN	−0.38	−0.09	−0.12	−0.17	0.60	0.37	−0.14	−0.13	**0.73**	0.31
SocTE	0.38	0.26	0.34	0.38	−0.08	−0.07	0.26	−0.05	−0.23	**0.99**

Note: Bold diagonal elements are square root of AVE; values below diagonal are Fornell-Larcker criterion and values above diagonal are the $HTMT0_{.85}$ ratio.

0.07, SRMR = 0.08, TLI = 0.91, CFI = 0.94, AIC = 880.637; BCC = 904.137). As presented in Table 5, we hypothesised that the six dimensions of perceived empowerment through tourism positively affect attitudes towards ecotourism. The results showed the effects of perceived sociological (β = 0. 0.311, $p < 0.001$), economic (β = 0.173, $p < 0.05$), and environmental (β = 0.155, $p < 0.05$) tourism empowerment on attitudes about ecotourism were found to be positive and significant. Thus, providing support to H_{1b}, H_{1e} and H_{1f}. However, the effects of psychological (β= -0.006, $p > 0.05$), cultural (β = 0.119, $p > 0.05$) and political (β = 0.069, $p > 0.05$) tourism empowerment on attitudes about ecotourism were not significant, suggesting that these types of empowerments do not significantly affect attitudes towards ecotourism. Therefore, H_{1a}, H_{1c} and H_{1d} were rejected. When examining the influence of attitudes, subjective norms, and perceived behavioural control on the behavioural intention to engage in ecotourism, the results indicated significant positive effects. Specifically, attitude (β = 0.234, $p < 0.01$), subjective norms (β = 0.507, $p < 0.001$), and perceived behavioural control (β = 0.538, $p < 0.001$) all demonstrated significant positive relationships with behavioural intention to engage in ecotourism.

To inspect the robustness of our results, we tested whether a more parsimonious model, using the six dimensions of RETS as a second-order construct, would increase the predictive power of the model. Results indicated that the second-order model was significantly better than the hypothesised first-order model ($\chi^2_{(297)} = 593.626$, $p < 0.001$, $\chi^2/df = 1.999$, RMSEA = 0.063, SRMR = 0.07, TLI = 0.924, CFI = 0.935, AIC = 755.626; BCC = 775.876), showing lower parsimony-adjusted measures such as the AIC and BCC than the hypothesised first-order model. In terms of the relationships, the higher construct empowerment exhibited a significant positive effect on attitude (β = 0.401, $p < 0.001$), indicating that increased empowerment in the ecotourism sector is associated with more positive attitudes towards ecotourism. In addition, the coefficients of determination (R^2) indicate that the second-order model explains more variance in both attitudes ($R^2 = 70\%$) and intentions ($R^2 = 89\%$) compared to the first-order model ($R^2_{\text{attitudes}} = 33\%$; $R^2_{\text{intention}} = 82\%$).

Discussion

Conclusion

The first aim of our research was to consider the psychometric properties of a modified RETS (with the addition of economic, cultural, and environmental empowerment) based on the work of Scheyvens and van der Watt (2021). Those dimensions collectively exhibited higher psychometric properties (e.g. CRs, AVEs, and square root of AVEs) than the existing RETS dimensions (apart from sociological) within our study. That said, when we compare such properties of the existing RETS dimensions (most specifically with Moreira dos Santos et al., 2024) with empirical work on the construct, we see some notable differences, especially among CRs, AVEs, and model fit indices. Our psychological and political empowerment CRs (from our first CFA model)

Table 5. Results of first-order and second-order structural models.

					Coefficient of determination (R^2)	
	Paths	Effects	*t*-value	*p*-value	Attitude	Intention
First-order	EcoTE → ATT	0.173	2.140	0.032	0.33	0.82
	PsyTE → ATT	−0.006	−0.084	0.933		
	SocTE → ATT	0.311	3.880	0.000		
	CulTE→ ATT	0.119	1.508	0.131		
	PolTE → ATT	0.069	0.857	0.391		
	EnvTE → ATT	0.155	2.050	0.040		
	ATT → BIEE	0.234	3.147	0.002		
	SBN → BIEE	0.507	4.461	0.000		
	PBC → BIEE	0.538	5.559	0.000		
Second-order	EMP → ATT	0.839	5.766	0.000	0.70	0.89
	ATT → BIEE	0.398	3.437	0.000		
	SBN → BIEE	0.831	4.928	0.000		
	PBC → BIEE	0.268	2.442	0.015		

Notes: See abbreviations from Table 3. EMP is second-order perceived empowerment.

were lower than all other studies employing the RETS (Aleshinloye et al., 2021; Boley & McGehee, 2014; Boley et al., 2014; 2015; Joo et al., 2020; Maruyama et al., 2017a; Moreira dos Santos et al., 2024; Strzelecka et al., 2017a; 2017b; 2023), yet our social empowerment CR was higher in comparison to the same studies. Concerning AVEs, the same patterns held (i.e. our AVEs for psychological and political were lower; AVE for sociological was higher) but only in five studies (Aleshinloye et al., 2021; Joo et al., 2020; Maruyama et al., 2017a; Moreira dos Santos et al., 2024; Strzelecka et al., 2023). In the other studies (Boley et al., 2014; 2015; Boley & McGehee, 2014; Strzelecka et al., 2017a; 2017b), our AVEs for psychological, sociological, and political empowerment were all higher. When looking at model fit indices (e.g. CFI and RMSEA), our findings indicated a better fit than each of the RETS studies using structural equation modelling. When specifically examining psychometric properties from our final CFA model against those of Moreira dos Santos et al. (2024), our standardised factor loadings, CRs, and AVEs were all higher. Further, our construct validities – convergent and discriminant – were stronger than those in Moreira dos Santos et al.'s (2024) work.

Our second aim was to examine the predictive validity of the modified RETS through its incorporation with a theory of planned behaviour model. In essence, our desire was to further extend the work by Boley and colleagues (Boley et al., 2014; 2018; Maruyama et al., 2017a; Strzelecka et al., 2017b; 2023) and provide greater implications of residents' empowerment beyond simply attitudes about tourism. In looking at the six hypotheses concerning empowerment dimensions explaining residents' attitudes about engaging in ecotourism, of the original RETS dimensions, only sociological was a significant predictor. This is in keeping with what Maruyama et al. (2017a) and Strzelecka et al. (2017a; 2023) found. Somewhat surprising, however, was that psychological empowerment was not a significant predictor which is contrary to what others have found (see Boley et al., 2014; Maruyama et al., 2017a; Moreira dos Santos et al., 2024; Strzelecka et al., 2017a,b; 2023). One possible explanation for this may be that our two items reflecting psychological empowerment were written with implicit notions that residents were employed within the tourism sector and have received tourism training. Though we did not ask participants about these two descriptive variables, we can infer that most were not employed nor had received tourism training. Our findings regarding political empowerment were consistent with existing research; only two studies have demonstrated a significant relationship between political empowerment and attitudes about tourism (Moreira dos Santos et al., 2024a,b; Strzelecka et al., 2023). Only the latter work was in the context of three rural nature tourism destinations (the closest work to our own here considering ecotourism).

Of the new perceived empowerment dimensions, both economic and environmental empowerment were significant predictors of attitudes about ecotourism. The former finding is counter to what Strzelecka et al. (2017a,b; 2023) reported in using a somewhat comparable measure, personal

economic benefit – the authors did not find it to be a significant predictor. Arguably, the most telling result from our study's six hypotheses involving the perceived empowerment dimensions was that environmental empowerment was a significant predictor in explaining residents' attitudes about ecotourism. All told, the six RETS dimensions explained 33% of the variance in attitudes about ecotourism. This is higher than the 25% of variance explained in support for sustainable tourism based on Moreira dos Santos et al.'s (2024) five empowerment dimensions. Given our study is the first to assess how these two forms of perceived empowerment from tourism significantly explain attitudes about ecotourism, additional research should be undertaken to determine whether such relationships hold in additional ecotourism destinations. This would provide further evidence of the utility of Scheyvens and van der Watt's (2021) measures.

The second hypothesis (H_2), stating that attitudes about ecotourism was a significant predictor of intentions to engage in ecotourism, was supported. This is in keeping with most of the recent research within tourism connecting attitudes towards a behaviour and intentions to engage in such behaviour (Cahigas et al., 2023; Erul et al., 2020; Erul & Woosnam, 2022; Shen & Shen, 2021; Wang et al., 2022; Wong et al., 2022; Xu et al., 2022). More specifically, Zhang and Lei (2012) reported that ecotourism attitudes of residents in five rural communities in China significantly explained individuals' desires to participate in the niche form of tourism. The third hypothesis (H_3) was also supported, highlighting social norms concerning ecotourism engagement were a significant predictor of engagement intentions – which is consistent with what others have found (Cahigas et al., 2023; Erul et al., 2020; Erul & Woosnam, 2022; Shen & Shen, 2021; Wong et al., 2022). Of the three TPB antecedents, subjective norms had the second highest effect size in explaining intentions. Erul and Woosnam (2022) reported a similar finding in their research. The final hypothesis, H_4, was not only supported but perceived behavioural control served as the strongest predictor (based on 1st order effect size) of intentions to engage in ecotourism. Both findings are consistent with what Cahigas et al. (2023), Erul and Woosnam (2022), and Wong et al. (2022) each found in their studies concerning behavioural support for tourism in general. Finally, as reflected in Table 5, by treating the newly amended RETS and its six dimensions as a 2nd order construct, the variance explained in attitudes about tourism and behavioural intentions to engage in ecotourism increases (33% to 70% for the former and 82% to 89% in the latter).

Implications

Both theoretical and applied implications exist from our study's findings. While Scheyvens and van der Watt (2021) formulated the six dimensions of perceived empowerment through tourism and proposed operationalised measures of each (pp. 13-14), our work aimed to examine what is, in essence, an amended RETS's psychometric properties. Findings from reliability and validity tests, like what Boley and McGehee (2014) subjected their original RETS, highlight the potential utility of the new scale for future use. For instance, subsequent research may consider utilising the modified RETS among residents in contexts where both natural and cultural resources (given the six dimensions cut across each major form of resources) are integral to the provision of tourism (i.e. destinations within Sub-Saharan Africa, the Middle East, and Asia). As Scheyvens and van der Watt (2021) caution, however, 'it is rare to find examples in practice where all dimensions of empowerment are improved by the presence of tourism (p. 14)'. That said, future researchers should not be surprised to find varying degrees of perceived empowerment across the six dimensions as many of the studies employing the RETS we have reviewed reflect disparate perceptions of psychological versus social and political empowerment (Boley et al., 2014, 2015; Boley & McGehee, 2014; Strzelecka et al., 2017a, 2017b, 2023).

Our work, considering the nomological validity of the new RETS scale, reflects continued support for considering its dimensions as antecedents of other measures (through the theory of planned behaviour). This is in keeping with other works testing theoretical models involving place attachment (Strzelecka et al., 2017a,b), Weber's theory of formal and subjective rationality (Boley et al., 2014; Strzelecka et al., 2017b, 2023), and attribution theory (Su et al., 2023). And although most of

these models involving perceived empowerment consider the construct as an antecedent (or predictor), the ground is rather fertile to explore additional constructs that may help to explain the six dimensions of the new RETS (using quantitative research designs). Some potential considerations may be community control of financial benefits (Ramos & Prideaux, 2014), cultural dominance within communities (Maruyama et al., 2017b), social distance (Woosnam et al., 2024), involvement in governance in tourism operations (Aghazamani & Hunt, 2017), residents' involvement in tourism decision making (Ruiz-Ballesteros & Hernández-Ramírez, 2010), emotional solidarity with tourists (Woosnam et al., 2016), and challenged notions of women's traditional domestic roles (Moswete & Lacey, 2015). Each of these works have tangentially linked the four proposed constructs to perceived empowerment (through conceptual or qualitative works), not tested through a predictive model like ours. Further, using our parsimonious 13-item amended RETS (compared to the 15-item scale only capturing five empowerment dimensions by Moreira dos Santos et al., 2024) will serve to reduce the burden of time for survey participants to complete an instrument, all the while capturing a more robust measure of empowerment (through its six dimensions).

Practical implications also exist from our findings. As mentioned earlier, Ecuador's Ministry of Tourism, at the end of January 2022 developed a new strategy to attract ecotourists – with the region including Chimborazo playing a central role to reach 2 million visitors by 2025 (González Lara, 2022). Given the region possessing a modest number of ecotourism enterprises, it is intuitive to gauge residents' attitudes about ecotourism and their likelihood of engaging within the industry – not only as employees but also employers – amid this government push to attract ecotourists. Sure, people can travel to experience the volcanos of the region, climb their peaks, and visit indigenous villages, but without guides, outfitters, camping facilities, established networks of trails and food services, it will not be sustainable. Our work was a step in the right direction to gauge residents' interest in being part of the push to develop ecotourism in this mountainous region of Ecuador. That said, much work is needed in educating residents of the potential for ecotourism given its novelty in the area. Of course, one obvious way in which to do this would be to stress how engaging in ecotourism could be empowering for residents – helping to provide incomes for both men and women; husbands and wives (KC, 2021). Government-sponsored public service advertisements in print form (e.g. billboards, flyers posted at local businesses, etc.) or audio form (e.g. radio announcements) may be a way to spread the word about ecotourism opportunities. Workshops hosted by local and regional colleges and universities to train residents in either starting small businesses or working within ecotourism services would be the next step.

Limitations and future research

Our work is not without limitations. We began with a small pool of items. This was to be as true to the items that Scheyvens and van der Watt (2021) proposed in their work. In hindsight, it may have been better to include additional items with the potential to provide a more robust representation of each dimension. Though some would argue that two items per dimension is adequate; others will claim it to be too few. Additionally, as we examined our third item within the environmental empowerment dimension, we have come to realise that respondents' self-perceptions are not represented in the existing word (as it is for the first two items within the dimension). Future researchers may consider altering the wording in a form such as, 'I believe tourism businesses should take the lead in implementing sustainable practices' to maintain the essence of the item that Scheyvens and van der Watt (2021) proposed. Despite these limitations, we are pleased with the way in which the factor structure and corresponding psychometrics performed across our 13 items. Though our work marks a starting point in advancing an amended Residents through Empowerment Scale (RETS), future research may add items to see if psychometrics properties improve and/or constructs are enhanced, as Koc and Yazici Ayyildiz (2022) suggest in their recent review of tourism and hospitality scales.

Beyond the demonstrated strong psychometric properties of the modified RETS, our work revealed a robust degree of variance explained in residents' intentions to engage in ecotourism

within Riobamba – as noted through the inclusion of TPB constructs. Reflected within our conceptual model, we stopped shy of determining Riobamba residents' actual behaviour of engaging in ecotourism. Though the theory of planned behaviour was initially designed by Ajzen (1991) to ascertain behaviour, the notion of ecotourism is very novel within Riobamba and surrounding Chimborazo making it extremely difficult to accurately gauge behavioural engagement in this niche form of tourism. Subsequent work may consider explaining behavioural engagement in ecotourism based on residents' intentions, for instance, using the ecotourism behaviour scale developed by Lee and Jan (2018) which includes 30 items across seven distinct dimensions.

Acknowledgement

This work is also partially financed by Portuguese Funds provided by FCT –Foundation for Science and Technology (Portugal) through project UIDB/04020/ 2020 and with DOI 10.54499/UIDB/04020/2020.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This research was approved by the Instituto de Investigaciones at ESPOCH in Ecuador.

References

Abdullah, T., Carr, N., & Lee, C. (2023). The empowerment of street food vendors: a marginalised community within the hospitality industry. *Tourism Recreation Research*, *48*(6), 885–898.

Abou-Shouk, M. A., Mannaa, M. T., & Elbaz, A. M. (2021). Women's empowerment and tourism development: A cross-country study. *Tourism Management Perspectives*, *37*, 100782. https://doi.org/10.1016/j.tmp.2020.100782

Aghazamani, Y., & Hunt, C. A. (2017). Empowerment in tourism: A review of peer-reviewed literature. *Tourism Review International*, *21*(4), 333–346. https://doi.org/10.3727/154427217X15094520591321

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Aleshinloye, K. D., Woosnam, K. M., Erul, E., Suess, C., Kong, I., & Boley, B. B. (2021). Which construct is better at explaining residents' involvement in tourism; emotional solidarity or empowerment? *Current Issues in Tourism*, *24*(23), 3372–3386. https://doi.org/10.1080/13683500.2021.1881051

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411.

Boley, B. B., Maruyama, N., & Woosnam, K. M. (2015). Measuring empowerment in an eastern context: Findings from Japan. *Tourism Management*, *50*, 112–122. https://doi.org/10.1016/j.tourman.2015.01.011

Boley, B. B., & McGehee, N. G. (2014). Measuring empowerment: Developing and validating the resident empowerment through tourism scale (RETS). *Tourism Management*, *45*, 85–94. https://doi.org/10.1016/j.tourman.2014.04.003

Boley, B. B., McGehee, N. G., Perdue, R. R., & Long, P. (2014). Empowerment and resident attitudes toward tourism: Strengthening the theoretical foundation through a Weberian lens. *Annals of Tourism Research*, *49*, 33–50. https://doi.org/10.1016/j.annals.2014.08.005

Boley, B. B., Strzelecka, M., & Watson, A. (2018). Place distinctiveness, psychological empowerment, and support for tourism. *Annals of Tourism Research*, *70*, 137–139. https://doi.org/10.1016/j.annals.2017.12.010

Cahigas, M. M. L., Prasetyo, Y. T., Persada, S. F., & Nadlifatin, R. (2023). Examining Filipinos' intention to revisit Siargao after Super Typhoon Rai 2021 (Odette): An extension of the theory of planned behavior approach. *International Journal of Disaster Risk Reduction*, *84*, 103455. https://doi.org/10.1016/j.ijdrr.2022.103455

Carrión-Mero, P., Borja-Bernal, C., Herrera-Franco, G., Morante-Carballo, F., Jaya-Montalvo, M., Maldonado-Zamora, A., … Berrezueta, E. (2021). Geosites and geotourism in the local development of communities of the Andes Mountains. A case study. *Sustainability*, *13*(9), 4624. https://doi.org/10.3390/su13094624

Cevallos, H. C. E., Salazar, Y. J. C., & Villalva, G. M. R. (2022). The role of local gastronomy in the development of tourist destinations: A brief study of Riobamba, Chimborazo Province, Ecuador. *Journal of Positive School Psychology*, *6*(8), 1173–1179.

Dolezal, C., & Novelli, M. (2022). Power in community-based tourism: Empowerment and partnership in Bali. *Journal of Sustainable Tourism*, *30*(10), 2352–2370. https://doi.org/10.1080/09669582.2020.1838527

dos Santos, E. R. M., Pereira, L. N., Pinto, P., & Boley, B. B. (2024). Development and validation of the new resident empowerment through Tourism Scale: RETS 2.0. *Tourism Management*, *104*, 104915.

Elshaer, I., Moustafa, M., Sobaih, A. E., Aliedan, M., & Azazz, A. M. (2021). The impact of women's empowerment on sustainable tourism development: Mediating role of tourism involvement. *Tourism Management Perspectives*, *38*, 100815. https://doi.org/10.1016/j.tmp.2021.100815

Erul, E., & Woosnam, K. M. (2022). Explaining residents' behavioural support for tourism through two theoretical frameworks. *Journal of Travel Research*, *61*(2), 362–377. https://doi.org/10.1177/0047287520987619

Erul, E., Woosnam, K. M., & McIntosh, W. A. (2020). Considering emotional solidarity and the theory of planned behavior in explaining behavioral intentions to support tourism development. *Journal of Sustainable Tourism*, *28*(8), 1158–1173. https://doi.org/10.1080/09669582.2020.1726935

Garay, L., Font, X., & Corrons, A. (2019). Sustainability-oriented innovation in tourism: An analysis based on the decomposed theory of planned behavior. *Journal of Travel Research*, *58*(4), 622–636. https://doi.org/10.1177/0047287518771215

Gobierno Autonomo Descentralizado Municipal del cantón Riobamba (GADMR). (2020). *Plan de Desarrollo y Ordenamiento Territorial del canton Riobamba*. Retrieved 19 June, 2023 from, http://www.gadmriobamba.gob.ec/index.php/ordenamiento-territorial/plan-pdyot-2020-2030

Gobierno Autónomo Descentralizado Provincial de Chimborazo (GADPCH). (2020). *Plan de Desarrollo y Ordenamiento Territorial*. Retrieved 18 June, 2023 from, http://chimborazo.gob.ec/principal/wp-content/uploads/2022/06/PDOT.pdf

Godin, G., & Kok, G. (1996). The theory of planned behavior: A review of its applications to health-related behaviors. *American Journal of Health Promotion*, *11*(2), 87–98. https://doi.org/10.4278/0890-1171-11.2.87

Gogate, V., & Domingos, P. (2012). Formula-based probabilistic inference. arXiv preprint arXiv:1203.3482.

González Lara, M. (2022). *IFC Insights: In Ecuador, plans for a tourism boom*. Retrieved 28 April, 2023 from, https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/insights/plans-for-a-tourism-boom-in-ecuador

Hadinejad, A., Moyle, B., Scott, N., Kralj, A., & Nunkoo, R. (2019). Residents' attitudes to tourism: A review. *Tourism Review*, *74*(2), 150–165. https://doi.org/10.1108/TR-01-2018-0003

Hair, J. F., Black, W. C., Babin, B. J, & Anderson, R. E. (2018). *Multivariate data analysis* (8th ed.). Boston, MA: Cengage.

Hurley, A. E., Scandura, T. A., Schriesheim, C. A., Brannick, M. T., Seers, A., Vandenberg, R. J., & Williams, L. J. (1997). Exploratory and confirmatory factor analysis: Guidelines, issues, and alternatives. *Journal of Organizational Behavior*, *18*(6), 667–683. https://doi.org/10.1002/(SICI)1099-1379(199711)18:6<667::AID-JOB874>3.0.CO;2-T

Joo, D., Woosnam, K. M., Strzelecka, M., & Boley, B. B. (2020). Knowledge, empowerment, and action: Testing the empowerment theory in a tourism context. *Journal of Sustainable Tourism*, *28*(1), 69–85. https://doi.org/10.1080/09669582.2019.1675673

Joo, D., Woosnam, K. M., Strzelecka, M., & Boley, B. B. (2020). Knowledge, empowerment, and action: Testing the empowerment theory in a tourism context. *Journal of Sustainable Tourism*, *28*(1), 69–85.

KC, B. (2021). Ecotourism for wildlife conservation and sustainable livelihood via community-based homestay: A formula to success or a quagmire? *Current Issues in Tourism*, *24*(9), 1227–1243. https://doi.org/10.1080/13683500.2020.1772206

Koc, E., & Yazici Ayyildiz, A. (2022). An overview of tourism and hospitality scales: Discussion and recommendations. *Journal of Hospitality and Tourism Insights*, *5*(5), 927–949. https://doi.org/10.1108/JHTI-06-2021-0147

Lee, T. H., & Jan, F. H. (2018). Development and validation of the ecotourism behavior scale. *International Journal of Tourism Research*, *20*(2), 191–203. https://doi.org/10.1002/jtr.2172

Lenao, M., & Basupi, B. (2016). Ecotourism development and female empowerment in Botswana: A review. *Tourism Management Perspectives*, *18*, 51–58. https://doi.org/10.1016/j.tmp.2015.12.021

Maruyama, N., Woosnam, K. M., & Boley, B. B. (2017a). Residents' attitudes toward ethnic neighborhood tourism (ENT): Perspectives of ethnicity and empowerment. *Tourism Geographies*, *19*(2), 265–286. https://doi.org/10.1080/14616688.2016.1258432

Maruyama, N., Woosnam, K. M., & Boley, B. B. (2017b). Who is ethnic neighborhood tourism for anyway? Considering perspectives of the dominant cultural group. *International Journal of Tourism Research*, *19*(6), 727–735. https://doi.org/10.1002/jtr.2144

Mendoza-Ramos, A., & Prideaux, B. (2018). Assessing ecotourism in an Indigenous community: Using, testing and proving the wheel of empowerment framework as a measurement tool. *Journal of Sustainable Tourism*, *26*(2), 277–291. https://doi.org/10.1080/09669582.2017.1347176

Moswete, N., & Lacey, G. (2015). "Women cannot lead": Empowering women through cultural tourism in Botswana. *Journal of Sustainable Tourism*, *23*(4), 600–617. https://doi.org/10.1080/09669582.2014.986488

Nguyen, D. T. N., d'Hauteserre, A. M., & Serrao-Neumann, S. (2022). Intrinsic barriers to and opportunities for community empowerment in community-based tourism development in Thai Nguyen province, Vietnam. *Journal of Sustainable Tourism*, *30*(4), 723–741. https://doi.org/10.1080/09669582.2021.1884689

NOAA. (2023). *What is the highest point on Earth as measured from Earth's center?* Retrieved on 28 April, 2023 from, https://oceanservice.noaa.gov/facts/highestpoint.html#:~:text = Mount%20Everest's%20peak%20is%20the,center%20than%20Mount%20Everest's%20summit

Qiu, H., Wang, X., Morrison, A. M., Kelly, C., & Wei, W. (2022). From ownership to responsibility: extending the theory of planned behavior to predict tourist environmentally responsible behavioral intentions. *Journal of Sustainable Tourism*. https://doi.org/10.1080/09669582.2022.2116643

Ramón-Hidalgo, A. E., & Harris, L. M. (2018). Social Capital, political empowerment and social difference: A mixed-methods study of an ecotourism project in the rural Volta region of Ghana. *Journal of Sustainable Tourism*, *26*(12), 2153–2172. https://doi.org/10.1080/09669582.2018.1546711

Ramos, A. M., & Prideaux, B. (2014). Indigenous ecotourism in the Mayan rainforest of Palenque: Empowerment issues in sustainable development. *Journal of Sustainable Tourism*, *22*(3), 461–479. https://doi.org/10.1080/09669582.2013.828730

Rappaport, J. (1984). Studies in empowerment: Introduction to the issue. *Prevention in Human Services*, *3*(2-3), 1–8.

Ruiz-Ballesteros, E., & Hernández-Ramírez, M. (2010). Tourism that empowers? Commodification and appropriation in Ecuador's turismo comunitario. *Critique of Anthropology*, *30*(2), 201–229. https://doi.org/10.1177/0308275X09345426

Scheyvens, R. (1999). Ecotourism and the empowerment of local communities. *Tourism Management*, *20*(2), 245–249. https://doi.org/10.1016/S0261-5177(98)00069-7

Scheyvens, R. (2000). Promoting women's empowerment through involvement in ecotourism: Experiences from the Third World. *Journal of Sustainable Tourism*, *8*(3), 232–249. https://doi.org/10.1080/09669580008667360

Scheyvens, R. (2020). Empowerment. In A. Kobayashi (Ed.), *International encyclopedia of human geography* (2nd ed., pp. 115–122). Elsevier.

Scheyvens, R., & van der Watt, H. (2021). Tourism, empowerment and sustainable development: A new framework for analysis. *Sustainability*, *13*(22), 12606. https://doi.org/10.3390/su132212606

Shafieisabet, N., & Haratifard, S. (2020). The empowerment of local tourism stakeholders and their perceived environmental effects for participation in sustainable development of tourism. *Journal of Hospitality and Tourism Management*, *45*, 486–498. https://doi.org/10.1016/j.jhtm.2020.10.007

Sharma, S., Woosnam, K. M., Singh, G., & Stylidis, D. (2022). Investigating antecedent constructs affecting potential Australian travellers' destination image of Fiji amidst the COVID-19 pandemic. *Asia Pacific Journal of Tourism Research*, *27*(12), 1318–1335. https://doi.org/10.1080/10941665.2023.2166425

Shen, K., Geng, C., & Su, X. (2019). Antecedents of residents' pro-tourism behavioral intention: Place image, place attachment, and attitude. *Frontiers in Psychology*, *10*, 2349. https://doi.org/10.3389/fpsyg.2019.02349

Shen, K., & Shen, H. (2021). Chinese traditional village residents' behavioural intention to support tourism: An extended model of the theory of planned behaviour. *Tourism Review*, *76*(2), 439–459. https://doi.org/10.1108/TR-11-2019-0451

Sofield, T. H. B. (2003). *Empowerment for sustainable tourism development*. Emerald Group Publishing.

Spenceley, A., & Rylance, A. (2021). Ecotourism and the sustainable development goals. In D. A. Fennell (Ed.), *Routledge handbook of ecotourism* (pp. 9–22). Routledge.

Strzelecka, M., Boley, B. B., & Strzelecka, C. (2017b). Empowerment and resident support for tourism in rural Central and Eastern Europe (CEE): The case of Pomerania. *Poland. Journal of Sustainable Tourism*, *25*(4), 554–572. https://doi.org/10.1080/09669582.2016.1224891

Strzelecka, M., Boley, B. B., & Woosnam, K. M. (2017a). Place attachment and empowerment: Do residents need to be attached to be empowered? *Annals of Tourism Research*, *66*, 61–73. https://doi.org/10.1016/j.annals.2017.06.002

Strzelecka, M., Prince, S., & Boley, B. B. (2023). Resident connection to nature and attitudes towards tourism: findings from three different rural nature tourism destinations in Poland. *Journal of Sustainable Tourism*, *31*(3), 664–687. https://doi.org/10.1080/09669582.2021.1995399

Su, L., Yang, X., & Swanson, S. R. (2023). The influence of motive attributions for destination social responsibility on residents' empowerment and quality of life. *Journal of Travel Research*, *62*(8), 1737–1754.

Su, M. M., Wall, G., Ma, J., Notarianni, M., & Wang, S. (2023). Empowerment of women through cultural tourism: perspectives of Hui minority embroiderers in Ningxia, China. *Journal of Sustainable Tourism*, *31*(2), 307–328. https://doi.org/10.1080/09669582.2020.1841217

Thyne, M., Woosnam, K. M., Watkins, L., & Ribeiro, M. A. (2022). Social distance between residents and tourists explained by residents' attitudes concerning tourism. *Journal of Travel Research*, *61*(1), 150–169. https://doi.org/10.1177/0047287520971052

Ulker-Demirel, E., & Ciftci, G. (2020). A systematic literature review of the theory of planned behavior in tourism, leisure and hospitality management research. *Journal of Hospitality and Tourism Management*, *43*, 209–219. https://doi.org/10.1016/j.jhtm.2020.04.003

Vizuete, D. D. C., Gavilanes Montoya, A. V., Muñoz Jácome, E. A., Chávez Velásquez, C. R., & Borz, S. A. (2021).). An evaluation of the importance of smart tourism tools in the Riobamba Canton, Ecuador. *Sustainability*, *13*(16), 9436. https://doi.org/10.3390/su13169436

Vizuete, D. D. C., Montoya, A. V. G., & Santamaría, G. E. R. (2023). Evaluation of the importance of rural tourist attractions in Riobamba Canton, Ecuador. *Environment Systems and Decisions*, *43*(2), 200–210. https://doi.org/10.1007/s10669-022-09871-1

Wang, Q., Liao, Y. E., & Gao, J. (2022). Rural residents' intention to participate in pro-poor tourism in southern Xinjiang: A theory of planned behavior perspective. *Sustainability*, *14*(14), 8653. https://doi.org/10.3390/su14148653

Wang, Y., & Han, W. (2022). The influence of destination promotion videos on residents' sense of empowerment and support for tourism. *SAGE Open*, *12*(3), 21582440221106730.

Wong, A. K. F., Wu, H., & Kim, S. (2022). Residents' perceptions of tourism influence and intention to support tourism development: Application of the theory of planned behavior. *Journal of China Tourism Research*, *18*(4), 710–734. https://doi.org/10.1080/19388160.2021.1964668

Woosnam, K. M., Aleshinloye, K. D., & Maruyama, N. (2016). Solidarity at the Osun Osogbo Sacred Grove—A UNESCO world heritage site. *Tourism Planning & Development*, *13*(3), 274–291. https://doi.org/10.1080/21568316.2015.1104380

Woosnam, K. M., Joo, D., Ribeiro, M. A., Johnson Gaither, C., Sánchez, J. J., & Brooks, R. (2024). Rural residents' social distance with tourists: an affective interpretation. *Current Issues in Tourism*, *27*(6), 939–953. https://doi.org/10.1080/13683500.2023.2191836

Wu, S. T., & Chen, Y. S. (2018). Local intentions to participate in ecotourism development in Taiwan's Atayal communities. *Journal of Tourism and Cultural Change*, *16*(1), 75–96. https://doi.org/10.1080/14766825.2016.1253705

Xu, J., Choi, H. C., Lee, S. W., & Law, R. (2022). Residents' attitudes toward and intentions to participate in local tourism during and after the COVID-19 pandemic. *Asia Pacific Journal of Tourism Research*, *27*(5), 473–488. https://doi.org/10.1080/10941665.2022.2091945

Zhang, H., & Lei, S. L. (2012). A structural model of residents' intention to participate in ecotourism: The case of a wetland community. *Tourism Management*, *33*(4), 916–925. https://doi.org/10.1016/j.tourman.2011.09.012