Measuring Resident Perceptions of Economically Benefiting from Tourism

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Introduction & Literature Review

At the core of the resident attitudes literature is the generally accepted understanding that the more residents benefit financially from tourism, the more they tend to support it. Madrigal (1993, p. 337) writes that "perhaps the most persistent finding over the years has been the positive relationship between perceptions of tourism and economic reliance on the tourism industry." While this relationship is a central tenet of the resident attitude literature, to date there has yet to be a reliable and valid scale developed to accurately measure resident perceptions of economically benefiting from tourism.

Previous research has approached the measurement of resident perceptions of economically benefiting from tourism rather haphazardly. Evidence of this can be found by researchers measuring resident perceptions of economically benefiting in four disparate directions without a common reliable and valid scale to unite the literature. The first approach has been to measure resident perceptions of economically benefiting from tourism through underdeveloped scales that use only one or two items to measure the latent construct (Carmichael, 2000; Ward & Berno, 2011). While this has initiated a general understanding of how residents evaluate the economic benefits of tourism, the underdeveloped nature of this past research is problematic because one's perceptions of economically benefiting from tourism are too complicated to be measured with only one or two items.

The second approach has been to steer away from measuring resident perceptions of economically benefiting from tourism and use their employment within the industry as a proxy for their perceptions of economically benefiting (Ward & Berno, 2011). While many have found a relationship between employment in tourism and positive perceptions of the industry, employment, as a dichotomous (e.g., yes/no) variable, is a far less powerful measure of economically benefiting from tourism than measuring one's actual perceptions using self-reported interval-level data. This is for multiple reasons. First, the type of multivariate statistics available when using categorical variables is weakened. Second, and arguably the most important, is that tourism is frequently criticized for providing marginal employment (Faulkenberry et al., 2000; Thomas, 1980). If researchers only use employment as a proxy for economically benefiting from tourism, then they are not able to dive deep into the nuances of whether or not the resident perceives their employment within as beneficial.

The third approach has been for some to write about the economic benefits of tourism while their survey items, at face validity, actually only measure the personal benefits of tourism (McGehee & Andereck, 2004; Perdue et al., 1990). This lumping of the economic benefits from tourism with all of the other benefits of tourism has led to some of the present confusion with the resident attitude literature and many of the criticisms behind social exchange theory (SET). For instance, Woosnam et al. (2009) critiqued SET for gravitating towards economic exchange theory and solely treating the relationship between residents and tourists as a function of money. When the personal economic benefits from tourism are combined with other benefits of tourism and measured using generic phrases like "I would benefit from more tourism development in this community" (Perdue et al., 1990), it prevents researchers from partitioning out which economic and non-economic benefits from tourism are most important to residents.

The last approach has been to switch the focus from measuring resident perceptions of the personal economic benefits of tourism to measuring tourism's impacts within the community using a triple bottom line (TBL) perspective that accounts for tourism's environmental, social and economic impacts within the community (Kim, Uysal, & Sirgy, 2013). This TBL perspective takes the focus off of 'personal' economic benefits and places the attention on the community's economic development as a whole. While it is certainly important to understand resident perceptions of how tourism is impacting their community's economy, impacts within the community are inherently different from personal impacts.

Even though these four different approaches have yielded a good understanding of how residents evaluate the economic benefits of tourism, a reliable and valid scale measuring resident perceptions of economically benefiting from tourism is still needed for multiple reasons. First, it would provide a tested scale for researchers to use across all future resident attitude studies. This would help the body of literature on resident attitudes mature by being able to perform large meta-analyses across the literature to see how perceptions of economically benefiting from tourism influences support for tourism across different destinations and different contexts (Deci, Koestner, & Ryan, 1999). A reliable and valid measure of resident perceptions of economically benefiting from tourism is also needed to help remedy some of the criticism of social exchange theory (McGehee & Andereck, 2004; Nunkoo & Ramkisson, 2009; Rasoolimansesh et al., 2015; Woosnam, Norman, & Ying. 2009). By having a reliable and valid scale to specifically measure resident perceptions of economically benefiting from tourism, it allows for other scales focusing on non-economic constructs to be included in the analysis to see if resident attitudes are more a function of the economic benefits of tourism or other non-economic benefits such as empowerment, trust, emotional solidarity or community attachment.

Purpose

With this gap in mind, this study seeks to develop the Economic Benefit from Tourism Scale (EBTS). The scale's development follows Churchill's (1979) recommendations for scale development and uses three separate data collections (1 pretest and 2 main data collections) across the two countries of the United States of America (USA) and Poland to purify the scale and demonstrate its reliability and validity within an international context. The Poland sample from Choczewo in Pomerania is novel because it provides the ability to test the international validity of the scale and to see if the post-communist influence of Poland's past changes the psychometric properties of the scale.

Development of the Economic Benefit from Tourism Scale (EBTS)

Steps 1 & 2: Specifying the domain and item generation

In order to develop the EBTS, Churchill's (1979) eight steps for developing reliable and valid scales were closely followed. Churchill's first recommendation is to "specify the domain of the construct." This step basically calls researchers to perform an extensive review of the literature in order to delineate what is exactly to be measured. This type of rigorous review of the literature was performed within the introduction and literature review.

Churchill's second step is to generate a pool of items to measure the construct. This step was undertaken by a team of researchers with the goal of narrowing the previous literature's measurements into a more specific measure of the personal economic benefits of tourism. Specific items were generated to focus on tourism helping residents pay bills, the economic future of the resident being tied to tourism, and the resident benefiting economically from additional tourism (see Table 1).

Steps 3 & 4: Pilot Survey and Purification of the EBTS

Before testing the scale within a large data collection effort, Churchill's third and fourth recommendations are to pilot test the generated items in order to purify them using exploratory factor analysis and reliability statistics. A pilot test of the EBTS was conducting in Giles County, VA during February 2013. Of the 129 questionnaires distributed door-to-door to residents, 113 were returned and analyzed.

The items within the EBTS were analyzed using Kasier-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity to assess the level and significance of correlations between items within the scale before moving on to tests of reliability and validity. The scale's Bartlett test was significant at the .05 level and the KMO coefficient was 0.88 indicating it was appropriate to proceed with EFA.

Principle components EFA using varimax rotation was then used to illuminate ways to purify the EBTS. The EFA of the five items indicated unidmensionality with only a single Eigenvalue over the 1.0 threshold and 85% of the variance explained by the one factor. The factor loadings ranged from 0.90 to 0.97 and the Cronbach Alpha reliability coefficient was 0.96. The item "Tourism in ____ provides me with financial gain" was deleted because it shared many similarities with the other items and was deemed too repetitive. The revised 4-item scale had a Cronbach Alpha of .93 and explained 83% of the variance in the construct (Table 1).

Table 1. EFA Pilot Test of the Economic Benefit from Tourism Scale (EBTS)

	Factor Loading	**Eigen Value**	**Variance**	**Cronbach Alpha**
	Pretest in Giles County (n=112)[a]			
Economic Benefit from Tourism Scale (EBS)		4.3	85%	.96
Tourism in _____ helps me pay my bills	.95			
A portion of my income is tied to tourism in _____.	.90			
I would economically benefit from more tourism development in ___.	.90			
My family's economic future depends upon tourism in _____.	.90			
Tourism in _____provides me financial gain (deleted)	*.97*			

[a] *KMO Statistic = 0.88; Bartlett's Test of Sphericity = 0.000*

Step 5: Primary Data Collection

Following a pilot test, Churchill recommends a larger data collection effort to test the scale's reliability and validity using confirmatory factor analysis (CFA). In accordance with this recommendation, the remaining four items of the EBTS were administered to residents within Floyd, Botetourt, and Franklin Counties, Virginia during the spring of 2013.

The data collection method consisted of a self-administered, door-to-door, pen and paper questionnaire using a census-guided systematic random sampling scheme (see Boley & McGehee, 2014; Woosnam, 2012 for specifics). Throughout the six-week period of data collection, 1784 households were visited. Out of the 984 eligible residents intercepted, 900 were willing to participate with 84 declining. Of the 900 survey questionnaires distributed, 703 were returned and used within the study resulting in a 71% response rate.

Steps 6 & 7: Assessing Reliability and Validity with CFA

In accordance with Churchill's sixth and seventh steps focused on assessing reliability and validity, CFA was implemented since it provides a rigorous test of how well the measures' items represent the latent construct (Hair, Black, Babin, & Anderson, 2010). It goes beyond EFA's examination of the underlying structure and dimensionalities within the scale by providing a stringent test of model fit and construct validity.

With knowledge that the pilot test yielded a unidimensional structure, the scale was subjected to CFA to determine if the same dimensionality would result. The statistical modeling program, EQS v6.2, was utilized to develop the measurement model adding (using Lagrange Multiplier, or LM, tests) each error term (i.e., cross-loading items or error covariances) and then assessing whether such terms can be safely removed (using Wald tests) without compromising the $\Delta\chi^2/df$ critical value of 3.84 that Tabachnick and Fidell (2013) suggests.

Following two LM tests, six error terms (all covariances) were identified. Each were safely dropped from the measurement model after four Wald tests were undertaken, yielding a Satorra-Bentler $\chi^2(2, N = 703) = 15.69$, $p < 0.001$, with a comparative fit index (CFI) = 0.99 and root mean square error of approximation (RMSEA) = 0.10. A CFI in excess of 0.95 is considered to reflect good fit (Hu & Bentler, 1999) while an RMSEA between 0.08 and 0.10 indicates mediocre fit (MacCallum, Browne, & Sugawara, 1996). Considering internal consistency, the maximal weighted alpha (as provided by EQS) was high with a value of 0.90, and each standardized factor loading exceeded the critical value of 0.70 (Fornell and Larcker, 1981) (Table 2). Convergent validity was tested for in two distinct ways. First, all *t*-test values were associated with each loading were examined to ensure that they were significant ($p < 0.001$). Second, average variance extracted (AVE) was calculated and found to surpass the 0.50 threshold per Hair et al. (2010) recommendations. Taken together, these estimates demonstrate the reliability and validity for the EBTS[1].

[1] Discriminant and nomological validity were not assessed because there was only one dimension within the model.

Table 2. Results from the CFA of the Economic Benefit from Tourism Scale (EBTS) using the Virginia Sample

SCALE	Mean[b]	Std Factor Loading	*t*-test value	AVE	MWA
Economic Benefit from Tourism Scale (EBTS)[a]					
Tourism in _____ helps me pay my bills	2.30	0.85	24.82	0.69	0.90
A portion of my income is tied to tourism in _____.	2.15	0.86	25.79		
I would economically benefit from more tourism development in ___.	2.57	0.84	29.80		
My family's economic future depends upon tourism in _____.	2.13	0.78	21.07		

[a] Satorra-Bentler $\chi^2(df = 2, N = 703) = 15.69$, $p < 0.001$; CFI = 0.99, RMSEA = 0.10

[b] Item were rated on a 5-pt scale where 1 = strongly disagree and 5 = strongly agree

Step 8: Validating the EBTS in Choczewo, Poland

Churchill's eighth and final step is to take the validated scale and develop norms. While Churchill's recommendation is more geared towards developing explicit standards of performance, the development of norms can also be applied to testing the scale internationally. Ensuring that the scale is internationally valid is, in essence, a step towards developing norms because the research is testing the psychometric properties of the scale to make sure people respond to items within the scale in the same way regardless of situational factors.

Before testing the EBTS reliability and validity in Choczewo, Poland, the EBTS was translated using back-translation (Malhotra, Agarwal and Peterson, 1996). The bilingual Polish researcher translated the questionnaire directly from English to Polish and then back to English. Two researchers (the native Polish speaker and the native English speaker) were able to oversee the translation of the scale back and forth between English and Polish to ensure translational equivalence.

The translated EBTS was administered to 17 of the 29 rural towns and villages within the municipality boundaries of Choczewo, Poland during the summer of 2015. The census-guided systematic random sampling procedure employed resulted in some of the small rural villages and towns not being include within the data collection because of their low population numbers. The principal investigator distributed 400 questionnaires to resident heads of households or spouses with 301 usable surveys returned.

Following an identical CFA to that which was undertaken with the Virginia samples, data from the Poland sample was subjected to a two-step procedure to identify and address any error terms that may result in the process (Table 4). The final CFA model resulted in a Satorra-Bentler $\chi^2(2, N = 301) = 5.10$ $p = 0.08$, with a comparative fit index (CFI) = 0.99 and root mean square error of approximation (RMSEA) = 0.07. Such results indicate good fit of the data.

In further examining the psychometric properties of the EBTS in an international context, an MWA of 0.85 revealed that the scale continued to demonstrate high internal consistency. On the whole, however standardized factor loadings were lower than in the Virginia samples, with one actually less than 0.70. According to Comrey and Lee (1992), loadings of at least 0.50 are considered adequate. As with the Virginia samples, *t*-test values corresponding to each standardized factor loading were significant ($p < 0.001$) and the AVE was once more in excess of

0.50. Such measures continue to demonstrate the reliability and validity of the EBTS in an international context.

Table 3. Results from the CFA of the Economic Benefit Scale (EBS) using the Poland Sample

SCALE	Mean[b]	Std Factor Loading	*t*-test value	AVE	MWA
Economic Benefit from Tourism Scale (EBTS)[a]					
Tourism in _____ helps me pay my bills / *Moja sytuacja finansowa poprawiła się w wyniku rozwoju turystyki w gminie*	2.51	0.79	17.87	0.57	0.85
A portion of my income is tied to tourism in _____/ *Część mojego dochodu pochodzi z turystyki w gminie*	2.22	0.82	18.29		
I would economically benefit from more tourism development in ___/ *Czerpał(a)bym korzyści ekonomiczne w wyniku dalszego rozwoju sektora turystyki*	2.81	0.79	19.49		
My family's economic future depends upon tourism in _____/ Przyszłość mojej rodziny zależy od rozwoju turystyki w gminie	2.45	0.60	11.96		

[a] Satorra-Bentler $\chi^2(df = 2, N = 301) = 5.10$, $p = 0.08$; CFI = 0.99, RMSEA = 0.07

[b] Item were rated on a 5-pt scale where 1 = strongly disagree and 5 = strongly agree

Conclusion and Discussion

In an attempt to unify the literature, this study specifically used Churchill's (1979) suggestions for scale development to develop and validate the Economic Benefit from Tourism Scale (EBTS). With the EBTS reliability and validity confirmed, the EBTS can be used by destination managers to gauge their residents' perceptions of whether or not they economically benefit from tourism. With the economic promises of tourism being one of the biggest selling points used by governments to convince residents why they should support the industry, it is important to see if the promised economic benefits are materializing into positive perceptions of economically benefiting. In addition to the EBTS' ability to take a pulse of a community in regards to the economic benefits of tourism, it also has the ability to distinguish between the perceptions of those employed in tourism and those who are not. The EBTS provides a direct measure to gauge whether residents not employed within the industry see the economic benefits of tourism trickling down to them. If resident perceptions are not in alignment with the types of tax breaks they are receiving, destination managers may want to embark on a publicity campaign to educate their residents about the economic benefits of tourism within the community.

From a theoretical perspective, a reliable and valid scale to measure resident perceptions of economically benefiting from tourism has many positive implications for tourism researchers. The first implication pertains to the ability to perform large meta-analyses (Deci, Koestner, & Ryan, 1999). With the previous literature approaching the measurement of the construct in disparate directions, the literature has been handicapped from performing meta-analyses of the relationship between residents economically benefiting in tourism and their support for the industry. By having one unified measure of the construct, researchers could look at the effect sizes of these structural relationships across various types of tourism destinations. A valid EBTS also provides resident attitude researchers with a direct measure of the economic benefits of tourism. This opens the door for operationalizing theories such as Weber's Theory of Formal

and Substantive Rationality that allow for examining economic and non-economic factors that influence resident attitudes toward tourism such as empowerment, trust, and emotional solidarity.

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