Scale of Destination Image: A Replication and Extension

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The purpose of this paper is to conduct a replication and extension study of the Scale of Destination Image. Byon and Zhang’s (2010) Scale of Destination Image (SDI) is comprised of 18 items across four dimensions - infrastructure, attraction, value for money and enjoyment. A number of issues suggested a need to establish the SDI’s external validity. First, the scale was developed for a city destination. A number of the items in the Attraction factor, in particular, appear specific to a city destination. Second, the sample on which the scale was validated is small, barely meeting criteria for adequate sample size for confirmatory factor analysis. Furthermore, an examination of their CFA solution suggests potential problems. For two of the factors, average variance extracted does not meet the accepted criteria of AVE > .5 (Hair et al., 2010). In addition, the researchers report correlation between factors as high as \( r = .91 \), which may negate the discriminant validity of the identified factors.

Data for the replication and extension study were collected from an online survey of participants in a cycling event at Taupo, New Zealand. A total of 2,808 complete responses, representing a 29% response rate, were collected. Cases with missing data were eliminated, leaving 2,425 complete responses. Results were analyzed using exploratory factor analysis to determine the dimensionality and generalizability of the scale. The analysis identified the same four dimensions of destination image as determined by Byon and Zhang (2010). Construct Reliability (CR) for the four factors ranged between .817 and .912. AVE values ranged from .500 to .632, indicating the scale had a good reliability. In terms of construct validity, factor loadings ranged from .553 to .898 indicating adequate convergent validity.

However, the items comprising these four factors differed from those in the original SDI. INF1 to INF5 loaded as expected on the Infrastructure factor; VAL1 to VAL3 load as expected on the Value for Money factor; and ENJ1 to ENJ3 load as expected on the Enjoyment factor. However, the six Attraction items failed to perform as expected. ATT1 ([City] has good shopping facilities, ATT2 ([City] has beautiful natural attractions (parks, forests, and/or trails), and ATT3 ([City] has beautiful scenery) loaded alongside INF1 to INF5 on the general infrastructure factor. ATT4 (“city has a good climate”) and ENJ4 (“city is a novel travel destination) fail to load on any factor. Only ATT5 (“city offers interesting cultural events”) and ATT6 (“city offers interesting historical attractions”) remained as measures of an Attraction factor.

The differences between the two studies reflects previous research that highlights the difficulty in distinguishing between infrastructure, attractions and environment. For example, Murphy et al. (2000), include ‘interesting attractions’ as one of three items to measure a destinations infrastructure. Lew (1987) acknowledged the difficulty in differentiating between attractions and the destination’s transportation, accommodation and tourism services. Recent research on tourism chains may provide a starting point for future research seeking to better articulate the differences between attractions and infrastructure (Pyo, 2010).

The measurement of destination image remains an important research task. However, the proliferation of scales to measure destination image inhibits the generalizability of research findings. Each scale developed appears to be context-specific. Efforts to design a context specific scale of destination image should be just that – context specific. Efforts to create a scale with applicability in multiple contexts should collect data from multiple contexts so that a variety of destinations and a variety of participants - those with organic, induced and complex images of a destination – are all represented. Future research could utilise Byon and Zhang’s Scale of Destination Image as a starting point, but would be well advised to consider factor structure with regard infrastructure, attractions and cultural environment.