Recovery Satisfaction Construct and Construct-Related: Assessment Measurement From Item Response Theory

Enver Gerald Tarazona Vargas, Pontificia Universidad Católica del Peru, Peru
Giuliana Isabella, São Paulo University (FEA/USP), Brazil
José Afonso Mazzon, São Paulo University (FEA/USP), Brazil
Martín Hernani-Merino, Universidad del Pacífico (UP/Lima), Peru

Researchers have explored the antecedents and consequences of recovery satisfaction by creating, improving or using scales. However, scales should be invariant among contexts and cultures. Using item response theory, a methodological approach that helps measure items, we evaluated some constructs related to it. Results, limitations and future research are discussed.

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Martin Hernani-Merino, Universidad del Pacifico (UP/Lima), Peru
Giuliana Isabella, São Paulo University (FEA/USP), Brazil
Enver Gerald Tarazona Vargas, Pontificia Universidad Católica del Peru
José Afonso Mazzon, São Paulo University (FEA/USP), Brazil

ABSTRACT

In failure service situations, companies attempt to recover customer satisfaction. Keeping customers satisfied is necessary to retain existing customers, and it is much less expensive than acquiring new customers (Mittal & Kamakura, 2001). Therefore, many researchers have explored the antecedents and consequences of recovery satisfaction, investigating the relationship with other constructs, such as perception of justice (Isabella & Mazzon, 2015), trust (Zhou, 2013), negative emotions (Kuo & Wu, 2012), switching (Pick & Eisend, 2013) or post-purchase intention (Holloway, Wang, & Parish, 2005). Consumer researchers explore these relationships by creating, improving or using scales. According to Wong, Rindfleisch and Burroughs (2003), marketing researchers are increasingly interested in testing their measurements and theories in different segments. It is common for one scale to be used in different contexts or regions (Steenkamp & Baumgartner, 1998). Thus, scales need to measure constructs independently of the segment, context, culture or nation. Within this paradigm, item response theory (IRT) has emerged, a methodological approach that helps measure items on a scale in an invariant way. Based on that the present research aims to evaluate the measures of the construct related to recovery customer satisfaction using IRT. The use of IRT models for ordinal data type (as Likert scale) remain rare in the marketing literature (Bazán, Mazzon & Hernani-Merino, 2011); however, researchers have recognized their contributions to measuring latent variables or constructs (Bacon, 2012; De Jong & Steenkamp, 2010). Such research implies that it is also important to consider the dissemination and application of these methods in consumer research. Such research implies that it is also important to consider the dissemination and application of these methods in consumer research. We opted to test the recovery satisfaction construct and other related constructs (perception of justice, trust, negative emotion, switching and post-purchase intention) during failure service situations because this kind of consumer satisfaction is very important in today’s market. To evaluate the scales, we used the telecommunication failure service context. Since, the telecommunication signal is very important for a cell phone to work and, these companies have a high number of customer complaints compared to other segments. In the theoretical chapter of the full paper, we included the theoretical development of recovery satisfaction and its relationships, describing each construct. After that we described the methodology. Clearly, we surveyed college students in a metropolitan city, and we evaluated the construct measurements (items). All the participants had cell phones and service accounts with a telecommunication company. Participants used a computer lab to answer questions about a telecommunication failure service context. In some sections, we collected 265 surveys, of which 244 were considered valid. Participants responded to six famous and very used scales (described in details in the full paper) using seven-point rating scales. The analyses were based on IRT and in the classical test theory. For the marketing context, Singh, Howell and Rhoads (1990) proposed an IRT of graduated answers based on the Likert scale, selecting the most representative items. The measurement model (item analysis) were evaluated in two ways: (1) based on classical test theory (CTT), analyzing mean, standard deviation and estimating Cronbach’s alpha coefficient for the construct and the item-total correlation; and (2) based on item response theory, which estimates the parameters of discrimination (a) and difficulty (b) through the graded response model (GRM) (Samejima, 1969). This model is often used for ordinal data (Likert scale) in marketing research. The analysis of results reports the statistics of CTT and the parameter estimates from IRT for all items of the six constructs. With CTT, all the items had higher correlations (above 0.50). The analyses show that all items on the scale are useful in defining their respective constructs because IRT items in the model showed high or moderate quality for evaluating the discrimination parameters “a” estimate following the graded response model from Samejima (1969). Together, the IRT and CTT show that all items on all scales are useful in defining their respective constructs. In terms of discrimination, it is important to note the difficulty or the location that the items are presented. Thus, in CTT, mean scores measure the item difficulty, indicating the severity of the item; usually, a low average denotes low agreement with the item, while a high average suggests a high correlation with the item. The parameters from the IRT show the difficulty “b” of the items towards total agreement. The items have 7 score points; therefore, the distance of difficulty between one point to another is 6 (b1 to b6). We also graphically (in the full paper – please contact the authors if you want to read the full study) presented the information function of latent traits from six constructs: negative emotion, recovery satisfaction, post-purchase intention, switching, perception of justice and trust (divided in three dimensions: integrity, benevolence and competence). Working with IRT, we obtained more information about the items in the scales. IRT is a sound technique for evaluating items from scales, permitting researchers to define short scales, measure a construct without loss of significant information, or choose the best item from the construct scales when they cannot use many questions. Thus, while the TCC uses Alpha Cronbach to evaluate the reliability of a construct, the IRT uses the information function, indicating the upper range of ability where an item or scale could better discriminate between individuals. Superior information denotes more accuracy or reliability of the item in the construct (Embreton & Reise, 2000). This research contributes to the management field because companies can identify specific critical points in the service provided to consumers. This contribution is clear through analysis of the difficulty parameter (b), achieving the highest degree of agreement for items in the satisfaction construct. Based on this information, companies can develop marketing strategies and services according to the degree of difficulty in matching a particular item. We conclude the paper by mentioning some limitations. For instance, we used specific groups - undergraduate students; we run few scales related to recovery satisfaction however many other scales could be used; we also opted one scale for each construct, different scales could be used to test which one would be the best. Future researchers could study respondents’ abilities in the context of satisfaction with services and many other marketing contexts.
REFERENCES