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Best Practices in Scale Deployment:
Maximizing Relevance to Cross-Cultural and Marketing Strategy Research

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> "An experiment is a question which science poses to Nature, and a measurement is the recording of Nature's answer. But before an experiment can be performed, it must be planned—the question to Nature must be formulated before being posed."
>
> —Max Planck (1949)

Haws, Sample, and Hulland's (this issue) insightful paper on effectively using, adapting, and validating existing scales deserves the attention of social scientists in marketing, psychology, management, and beyond. It makes a compelling case for more rigorous measurement and transparent reporting of relevant scale-related decisions and provides a valuable toolkit of best practices for consumer behavior researchers to enhance the theoretical linkages of their findings with previous studies and to conduct and publish more systematic, comparable, and replicable research. While Haws et al. focus on scale deployment in experimental consumer behavior research, the conclusions and recommendations are applicable to broader marketing research and other business and management disciplines.

Compared with scale development, scale deployment has received less attention in the literature. Establishing the validity of existing measures or manipulations is not considered important unless it falls under the process of defining a new construct (Scopelliti, Vosgerau, & Huh, 2020). The tendency of editors, reviewers, and authors to casually accept previously used scales, whether originally validated or not, as valid may introduce confounds, lower statistical power, prevent the comparison of findings to prior research, and limit coherent cumulative knowledge in the field. We seek to extend the relevance of Haws et al.'s recommendations to cross-cultural/international marketing and marketing strategy research by outlining unique scale usage and deployment challenges in these domains and providing recommendations that complement those of Haws et al.

Cross-Cultural and International Marketing Research

Marketing research is increasingly expanding beyond Western, educated, industrialized, rich, and democratic populations. Because research is often conducted with different populations, with the ultimate goal of making informed comparisons across samples, cross-cultural and international consumer behavior researchers face unique measurement challenges with regard to scale usage and deployment. The importance of measurement in this area is underscored by a recent review that identified "psychometrically deficient measures" as the most pervasive methodological challenge in international business research (Aguinis, Ramani, & Cascio, 2020).

When Borrowing Scales "As-Is" May Not Work

Given that most marketing scales were developed and validated only in the United States (de Jong, Steenkamp, & Veldkamp, 2009), "as-is" use of validated scales can lead to measurement issues in international/cross-cultural marketing research for two main reasons. First, a scale validated in the United States may contain items that are not informative about the latent construct in other countries. Second, it may lack the relevant items to tap local cultural manifestations of the underlying construct. Thus, borrowing scales—even those that have been validated—may lead to invalid cross-national inferences.

For example, the consumer ethnocentrism scale (CETSCALE) was developed and validated with U.S. consumers (Shimp & Sharma, 1987). As evidence of nomological validity, consumers high in ethnocentrism were less positively disposed toward foreign products. However, although the scale was validated in a Western developed market, the correlation between ethnocentrism and consumers' attitudes toward foreign products was weaker in similar markets such as France and West Germany (Douglas & Nijssen, 2002). Furthermore, the relationship between ethnocentrism, assessed using CETSCALE, and negative attitudes toward

foreign brands disappeared in a Polish sample (Supphellen & Rittenburg, 2001). While these different results may have several valid reasons (e.g., level of nationalism, availability/quality of foreign products in the country), it illustrates the core issue that the as-is use of validated scales may not yield theoretically expected results because validation occurred in a different context. Thus, establishing construct equivalence is a crucial first step in rigorous cross-national and global marketing studies.

Measurement Equivalence

Researchers have proposed different types of measurement equivalence at varying levels of abstraction. Consistent with Hui and Triandis' (1985) typology, conceptual equivalence requires latent constructs to have the same meaning across contexts. However, establishing conceptual equivalence may require modification of the scale for a given context. International marketing scholars argue that it may be necessary to include country-specific items in addition to, or in place of, cross-national or standardized items (Aaker, Benet-Martinez, & Garolera, 2001) to ensure comprehensive coverage and specificity of the underlying construct across cultures.

While conceptual equivalence focuses on the construct, item and scalar equivalence refer to properties of the scale measuring the underlying construct. Item equivalence is the requirement that the response to a given scale item has the same meaning across contexts: "Each item should mean the same thing to subjects from Culture A as it does to those from Culture B" (Hui & Triandis, 1985, p. 134). Item equivalence may be negatively affected by culture-specific or ambiguously worded items. Through careful translation and pretesting, researchers must ensure that respondents across countries understand the scale items.

Finally, scalar equivalence occurs "if a particular score on a scale represents the same degree, intensity, or magnitude of the construct across contexts regardless of the population of which the respondent is a member" (Hui & Triandis, 1985, p. 135). Given the popularity of Likert scales in consumer behavior research, this involves ensuring the appropriateness of scale anchors across contexts. For example, Chinese respondents may associate a different intensity with the word "moderately" compared with U.S. participants. To address this, adequate attention should be paid to the translation of scale anchors, which should (1) have the same rank order and (2) cover equidistant intervals on the scale across contexts (Szabo, Orley, & Saxena, 1997). Researchers can ascertain measurement equivalence using various analytical techniques (e.g., factor analysis, structural equation modeling, item response theory; see de Jong et al., 2009).

Use of Scales to Measure Hofstede's Cultural Dimensions

Hofstede's (2011) six-dimensional typology of culture has been the dominant approach in cross-cultural research over the past four decades. Extant consumer behavior and marketing research has examined the influence of individualism-collectivism, power distance, and, to a lesser extent, uncertainty avoidance, long-term orientation, and masculinity on various consumption-related outcomes. While Haws et al. highlight the issue with using national-level scores for individuals in a particular country, we consider the selection of appropriate scales for assessing Hofstede's cultural dimensions.

Given the variety of scales available to measure cultural dimensions at the individual level, cross-cultural researchers must select the most appropriate measure for the study's purpose and context. For example, individualism-collectivism may be measured at the individual level using the 24-item independence/interdependence scale by Singelis (1994), the 13-item allocentrism-idiocentrism scale by Triandis, Chan, Bhawuk, Iwao, and Sinha (1995), or the 6-

item scale by Yoo, Donthu, and Lenartowicz (2011), among others. While some are standalone single-dimension scales, others are part of larger multidimensional scale development. In line with Haws et al., besides prioritizing validated scales, research must emphasize (1) the contexts in which the measures were validated; (2) the measures' relevance to the research question, conceptual framework, and sample (e.g., not using scales/items phrased in a work context for student samples); and (3) the measures' parsimony. If the research question involves different cultural dimensions, researchers may opt for scales developed and validated together (e.g., Madan, Savani, & Katsikeas, 2022) rather than independently developed and validated scales for specific dimensions—which may undermine discriminant validity among the separate scales (Yoo et al., 2011).

Survey-Based Marketing Strategy Research

Haws et al.'s guidelines are also relevant for survey-based marketing strategy research. Because these studies often develop and test multiconstruct conceptual models, scale selection and length issues require focal attention. Because marketing strategy studies are often conducted with salespeople, frontline service personnel, managers, or other nonstudent samples, excessively long surveys are ill-suited and can lead to respondent attrition and, thus, incomplete data collection. In alignment with Haws et al.'s individual-level focus, we consider marketing strategy research focusing on attitudes, behaviors, assessments, and/or outcomes of individuals (e.g., salespeople) and not on research dealing with firm-level constructs.

Because marketing strategy research is often conducted in different industry contexts, it is easy to fall prey to both ends of the continuum—using less suitable existing measures that are not meaningful to the specific study context or overadapting existing measures to fit the study context—which may render results incomparable with those in previous literature and potentially

impede collective theory building. For example, sales(force) control, a construct extensively studied in marketing, is widely believed to drive salesperson performance. Thus, research has investigated various factors mediating the sales control–performance link, including salesperson learning (Katsikeas, Auh, Spyropoulou, & Menguc, 2018), customer orientation and sales innovativeness (Evans, Landry, Li, & Zou, 2007), attributional dimensions (Fang, Evans, & Landry, 2005), and job engagement and stress (Miao & Evans, 2013), as well as various sales outcomes, including salesperson job satisfaction and performance (e.g., Evans et al., 2007) across multiple industries. Despite the centrality of sales control in the literature, the construct has been operationalized in multiple ways with different underlying dimensions. Kohli, Shervani, and Challagalla (1998) conceptualize control as a three-dimensional construct and employ 12 items. Fang et al. (2005) use 21 items and Katsikeas et al. (2018) employ eight items and one ratio indicator to tap these same dimensions, while Sarin, Challagalla, and Kohli (2012) consider outcome and process supervisory control actions, each comprising risk and reward dimensions measured by four three-item scales.

Such wide variation in operationalization makes the comparability of findings less meaningful and limits the potential for systematic replication studies that assess generalizability, lend credibility to extant knowledge, and advance theory. As Haws et al. argue, applying a less relevant scale can result in methodological confounds, loss of theoretical relevance, and lack of interpretation, thus undermining the synthesis of findings across studies for theory building.

While scholars have recommended using shorter multi-item scales to balance the need for high-quality responses and rigorous hypothesis testing, ad hoc reduction in the number of items can, as Haws et al. suggest, yield less-than-adequate coverage for theory testing and building and limit practical insights. Some techniques used to construct and validate scales may also be used

to address these concerns. After identifying commonly used scales to measure a construct of interest and contexts in which these scales have been used, researchers may assess comparative applicability and relevance using an expert panel comprising academics familiar with research in the field and practitioners. Panelists should be informed about the research question, the focal construct, its dimensions, and the study context (Malhotra, Mukhopadhyay, Liu, & Dash, 2012) to adequately assess which available measures are most suitable for the research.

This panel may assess the quality of individual items when researchers seek to modify items or remove/add items in an existing scale. Judges may be asked to evaluate items on their similarity, clarity, and representativeness to identify items that may be excluded without a significant loss of coverage of the construct's domain of content (Malhotra et al., 2012). Experts may also be used to evaluate the scale deployment of higher-order multidimensional constructs. Researchers could assess the level of agreement among experts on the extent to which items within each dimension fall into the conceptual domain of a specific dimension and contribute to the focal construct. Subsequently, measures selected through expert panel screening should be submitted to rigorous validation procedures.

Conclusion

It may be argued that the key objectives of empirical research in marketing are to deepen our understanding of marketplace phenomena, advance and build theory, and generate insights that are valuable to various stakeholders/constituents. What is less debatable is that all these objectives depend on good measurement. Using the right measures is imperative to ensure that research conclusions, whether they contribute to theory or practice, are defensible. As Haws et al. and our commentary illustrate, marketing research can benefit from a critical eye on measurement, especially the use of scales, to ensure that our discipline can meaningfully extend

old theories and build new ones and help stakeholders (e.g., managers, nongovernmental organizations, the public) understand and apply our research.

In their systematic review, Haws et al. make a compelling case for more rigorous measurement in consumer behavior research. Their broad-based pragmatic guidelines and their call for more transparent and detailed reporting of relevant scale-related decisions are essential for conducting research that inspires confidence and can be systematically and meaningfully extended and built on. Given the relevance of these guidelines for marketing researchers more broadly, in this commentary, we extend the relevance of Haws et al.'s recommendations to other subfields of marketing research, namely, cross-cultural/international marketing and marketing strategy research. We underscore the different challenges faced by researchers in these subfields regarding the use and deployment of existing scales and offer a set of recommendations, complementing those offered by Haws et al., to systematically address these concerns.

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