Factor Analysis

Article Summary

The Organizational Context of Market Research Use

Deshpande, Rohit (1982), "The Organizational Context of Market Research Use," Journal of Marketing 46 (Fall), 91–101.

Factor analysis was implemented in this research to attempt to reduce 23 scale items representing these individual facets down to a smaller set of dimensions that (1) would correspond to the conceptual model of organizational structure, while also (2) providing an adequate representation of the individual items. Factor analysis extracted five factors accounting for 70 percent of the variance in the original 23 questions. Examination of the factor matrix called for only three items to be deleted because of low or incorrect factor loadings. The criteria for inclusion on a particular factor were that items exhibited high loading for their own specific facets while loading at low levels on the other scale facets. Moreover, interpretation of the factor loadings supported the proposed structure, with the five factors directly corresponding to the hypothesized dimensions. The factor loadings then guided the creation of summated scales for each of the five dimensions. The usefulness of the summated scales was also demonstrated through their use as independent variables in a multiple regression analysis (see chapter 4, this volume), which provided acceptable levels of predictive accuracy and explanation in accordance with the research question. (Hair et al., 2021)

Academicians and business analysts have noted that despite the innovations in methods for the use of marketing research information, relatively few firms in the 1980's utilize these new techniques. This reluctance to utilize a valuable source of external market information can have substantive impacts on a firm's ability to recognize and react to market changes. One possible explanation for this lack of utilization is the influence of organizational structure. Organizational structure is conceptualized to have two dimensions: formalization and centralization. Each dimension also contains a number of sub-dimensions: three for formalization (job codification, rule observation, and job specificity) and two for centralization (participation in decision making and hierarchy of authority). A crucial task facing the researcher in determining the impact of organizational structure on the use of external information is to first develop a means of quantifying and measuring organizational structure that is applicable across a wide range of situations. To do so, the researcher must accommodate the myriad facets of each dimension and sub-dimension to ensure a complete and valid portrayal or a complex concept. Yet the researcher must also strive for parsimony in the number and character of the measures while also considering reliability issues. (Hair et al., 2021)

In summary, factor analysis provided for the development of a comprehensive model examining the impact of organizational structure on the usage of marketing research information while still maintaining model parsimony. The factors extracted in factor analysis provided the means for creating objective and replicable measures of the five dimensions of organizational structure that confirmed the conceptual model of organizational structure. These summated scales then acted as replacements for the individual items in the multiple regression analysis. The empirical analysis allowed the researchers to conclude that marketing managers are more likely to use research information when they work in a less structured, decentralized organizational environment in which there are few formal rules or procedures. (Hair et al., 2021)

Hair, J. F., C., B. W., Babin, B. J., & Anderson, R. E. (2021). *Multivariate Data Analysis.* Pearson Prentice Hall.