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Quantitative and qualitative comparative analysis in business

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ABSTRACT

Studies show that symmetric theory construction is problematic. Fuzzy-set qualitative comparative analysis (fsQCA) may be better suited to data analysis and theory construction. The Global Innovation and Knowledge Academy (GIKA) Conferences have consistently endeavored to promote outstanding research. Continuing in this endeavor, this special issue of the *Journal of Business Research* presents articles that explore “Quantitative and Qualitative Comparative Analysis in Business.” The original papers were presented at the 2017 GIKA Conference, held at ISEG School of Economics and Management, Lisbon, Portugal, from June 28 to 30, 2017. After undergoing double-blind peer review, 37 papers were accepted for publication as articles in this special issue.

1. Introduction

According to Hubbard (2016), the significant difference paradigm is “philosophically suspect, methodologically impaired, and statistically broken.” Woodside (2016) affirms that the majority of empirical studies in certain journals report only on the fit validity of regression models. Most of these models include nonsignificant terms in the multiple regression analysis (MRA) model findings. The *Basic and Applied Social Psychology* 2014 Editorial announces that the null hypothesis significance testing procedure is invalid. Accordingly, scholars should not be required to perform such testing (Trafimow, 2014).

Woodside (2017) lists the following problems with symmetric theory construction and testing such as MRA: (1) In practice, almost all relationships are statistically significant if the number of cases is large (for example ≥ 1000). (2) An observed relationship may have a large effect size, but contrarian cases are usually observable. (3) Symmetric models perform better in fit validity than asymmetric models do because symmetric models use more information on the associations of variations of independent variables and the dependent variable. However, asymmetric models perform better in prediction validation (Gigerenzer & Brighton, 2009). Symmetric modeling via MRA is so powerful that fit validation of such models is usually high even if random numbers are used for the values of the independent variables (Armstrong, 2012). (4) The use of variable-based tools such as symmetric analysis is a mismatch in testing case-based identification models. Unfortunately, many theory constructions in management science are case-based proposals (Fiss, 2007, 2011).

In light of these concerns, a new research method is necessary to provide valid findings. Wu, Yeh, and Woodside (2014) explain how complexity theory provides a solid foundation for advancing a radically new service dominant logic (SDL) theory and describe how Boolean algebra and asymmetric analytics are preferable to matrix algebra and symmetric analytics to test major tenets of complexity theory in SDL contexts. Rather than ignoring certain cases by reporting only on a positive main effect, fuzzy-set qualitative comparative analysis (fsQCA) can be used to model both positive and negative routes to the outcome.

FsQCA differs from conventional statistical methods (Ragin, 2008). First, fsQCA calibrates the data to values that lie between 0 and 1, where 0 denotes full non-membership and 1 denotes full membership. Conventional methods process data directly. Second, fsQCA is based on set theory, whereas conventional methods are based on correlations. Third, fsQCA uses configurations of conditions, whereas conventional methods use independent variables. Lastly, fsQCA enables analysis of causal complexity, whereas conventional methods entail analysis of net effects. Yu, Huang, and Huarng (2016) used fsQCA to examine associations between antecedents of energy consumption and economic development. The study provides two groups of causal recipes. One group represents the conditions for knowledge-intensive industrialized economies and the other represents the conditions for traditional industrialized economies. However, both groups lead to high GDP. This finding illustrates that a single equation may be insufficient to describe associations between antecedents of energy consumption and economic development.

The Global Innovation and Knowledge Academy (GIKA) Conferences are committed to promoting outstanding research. With the support of the *Journal of Business Research* special issues, previous GIKA Conferences have provided an excellent platform for scholars to share insightful findings

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(Huarng & Roig-Tierno, 2016; Roig-Tierno, Huarng, & Ribeiro-Soriano, 2016). The objective of this *Journal of Business Research* special issue is to continue these efforts to encourage outstanding research and gather high-quality QCA- and fsQCA-based studies that were presented at the 2017 GIKA Conference.

The 2017 GIKA Conference took place at ISEG School of Economics and Management, Lisbon, Portugal, from June 28 to 30, 2017. The Conference attracted > 600 submissions, only 300 of which were selected for presentation. The double-blind peer reviews recommended only 37 of these submissions for publication in this special issue. The articles that appear in this special issue are introduced below.

The first contribution in the special issue, by Sahut, Dalla, and Goetz, addresses “Implementation effects in the relationship between CRM and its performance.” This study advances research on CRM by investigating the impact of the relative time—according to which interventions are implemented in different areas—on the CRM performance of US and European firms. The authors argue that later implementation of organizational alignment activities has a negative impact on performance.

The next contribution, by Berezan, Krishen, Agarwal, and Kachroo, is titled “The pursuit of virtual happiness: Exploring the social media experience across generations.” This study examines social media networking as an experiential phenomenon. The authors suggest the metaphors for each generation based on (1) “we” for generation Y with relatedness and competence, (2) “me” for generation X with autonomy and competence, and (3) “be” for baby boomers with competence.

In “Greening the workplace through social sustainability among coworkers,” Paillé, Amara, and Halilem examine the role of job satisfaction in the context of the indirect effect of co-workers' support on eco-helping through commitment to colleagues and helping behaviors. Results indicate that commitment to colleagues and helping behaviors fully mediate the indirect effect of perceived co-workers' support in eco-helping.

The next contribution, by Capatina, Micu, Micu, Bouzaabia, and Bouzaabia, is titled “Country-based comparison of accommodation brands in social media: An fsQCA approach.” The study explores the relationships between social mention variables (e.g., strength, sentiment, passion, and reach) and the ranking of top accommodation brands in Romania and Tunisia. In doing so, the authors demonstrate that these are key factors for achieving a higher ranking on Facebook in terms of the ability to attract fans.

In the next article, Climent-Serrano, Bustos-Contell, Labatut-Serer, and Rey-Martí analyze how a reduction in the cost of auditing services affects service quality. They consider audit fees, other fees charged, the inclusion of explanatory paragraphs, qualified opinions, and emphasis of matter in audit reports, and EBITDA.

In the next article, Mafe, Chatzipanagiotou and Curras-Perez explain how systematic and heuristic information processing of conflicting online reviews can influence the consumer's purchase decision-making.

In “Earnings and Capital Management in European Banks – Combining Multivariate Regression and Qualitative Comparative Analysis,” Pinto and Picoto examine the effects of the sovereign debt crisis on the quality of financial reporting in European banks by investigating the existence of earnings and capital management. According to the results of this analysis, bank managers use loan loss provisions to manage earnings and regulatory capital. The findings indicate that in severely affected countries, earnings and capital management decreases. The fsQCA shows that loan loss provisions exist. In addition, a bank's size and nonperforming loans can play key roles.

Dos Santos, Rejón, Pérez, Calabuig, and Ko examine “Engagement in sports virtual brand communities.” This study explores the impact of sports sponsorship in virtual brand communities on consumers' engagement within these communities.

In “Examining relationship value in cross-border business relationships: A comparison between correlational and configurational approaches,” Skarmeas, Saridakis, and Leonidou present a conceptual model that identifies the key antecedents and outcomes of relationship value in international channel relationships and compare the findings of analysis using two different methodologies.

The next article, by Leischnig, Kasper-Brauer, and Thornton, examines how distinct levels of interpersonal adaptive behavior and service-offering adaptive behavior relate to customer satisfaction. The goal is to explore the relationships between these variables. The findings guide service managers in developing effective and efficient service designs.

Foroudi, Jin, Gupta, and Foroudi use the lenses of complexity theory to investigate the impact of brand perception on brand loyalty and brand purchase intention. The results imply that brand perception within the fashion industry must be more interactive to increase brand loyalty and brand purchasing intention.

Perez-Martin, Perez-Torregrosa and Lamata proposed eight methods for solving the problem of Credit Scoring in home equity loans.

The next article, titled “Can entrepreneurship channel over-qualification in young university graduates in the European Union?” by Crecente-Romero, Giménez-Baldazo, and Rivera-Galicia, answers the question that is posed in the title by analyzing entrepreneurship rate (GEM), expenditure on tertiary education (Eurostat), and over-qualification level (OECD) by country.

In the next article, Boratyńska and Grzegorzewska predict bankruptcy of agribusiness entities and compare the analysis with analysis using classical quantitative methods. The analysis has three phases: (1) Calculation and evaluation of predictive ability and classification errors of 35 selected quantitative bankruptcy methods (domestic and foreign); (2) fsQCA implementation to predict bankruptcy of 14 agribusiness entities, comprising the conditions that are typical of the agribusiness sector as well as financial and macroeconomic data; (3) indication and comparison of the advantages and disadvantages of fsQCA over classical bankruptcy prediction models.

The next article, “Antecedents of innovation performance in SMEs: A mixed methods approach,” by Curado, Muñoz-Pascual, and Galende, takes steps toward filling the research gap on product innovation performance (PIP) using mixed methods.

In the next article, Veríssimo uses logistic regression and fuzzy-set qualitative comparative analysis (fsQCA) to study the drivers that influence the usage intensity of mobile medical apps. The logistic regression shows that high usage intensity is explained by high perceived usefulness and high perceived ease of use. FsQCA shows that low usage intensity of mobile medical apps is associated with low perceived ease of use, high perceived usefulness, low peer influence, high seniority, and young female doctors.

The article titled “Imitation-related performance outcomes in social trading: A configurational approach,” by Berger, Wenzel, and Wohlgemuth, examines imitation-related configurations that explain performance outcomes in social trading.

The next contribution, “Domestic economic and social conditions empowering female Entrepreneurship” by Ribes-Giner, Moya-Clemente, Cervello, Perelló-Marín explores relationships between entrepreneurship, gender, and conditions of a country, especially those that are socially related to gender from the standpoint of female labor conditions.

In “Target costing and innovation - exploratory configurations: A comparison of fsQCA, multi-variate regression and variable cluster analysis,” Gonçalvez, Gaio, and Silva use contingency theory to analyze the relationship between innovation and other environmental and organizational determinants in adopting target costing (TC). This analysis extends the existing research by showing that previously tested determinants (competitiveness, environment uncertainty, and innovation) are neither sufficient nor necessary factors. Multiple configurations also show an economic