

The Cross-Disciplinary Perspectives of Management

CROSS-DISCIPLINARY MANAGEMENT PERSPECTIVES: APPLICATIONS, CHALLENGES AND OPPORTUNITIES

Edited by Yaakov Weber, Demetris Vrontis, Evangelos Tsoukatos and
S. M. Riad Shams

Cross-Disciplinary Management Perspectives presents a diverse range of cross-disciplinary insights from different business and management disciplines to offer new theoretical and practical perspectives and advances on key conceptual themes and issues in the management subject area. By extending scholarly understanding on how different business disciplines explore opportunities and minimize potential risks, the contributions to each title in the series will collectively offer diverse contemporary insights from an interdisciplinary business knowledge base. Each volume in the series is based on selected papers from the EuroMed Academy of Business Annual Conference Proceedings.

The Cross-Disciplinary Perspectives of Management: Challenges and Opportunities

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Emerald Publishing Limited
Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2020

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British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

ISBN: 978-1-83867-250-8 (Print)

ISBN: 978-1-83867-249-2 (Online)

ISBN: 978-1-83867-251-5 (Epub)



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ISO 14001:2004.

Certificate Number 1985
ISO 14001



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Introduction

*Yaakov Weber, Demetris Vrontis, Evangelos Tsoukatos
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This book is the first volume in the series named *Cross-Disciplinary Management Perspectives: Applications, Challenges and Opportunities*. The term cross-disciplinary research (CDR) refers to scientific practice that goes beyond one specific disciplinary boundary. It often refers to research that integrates theories, concepts, perspectives, information, and/or data from two or more scientific disciplines. Such research aims to explore and resolve some complex theoretical problems in the state of the art of one or more area of academic research. This scientific practice has potential to generate innovative research results and make an important impact on the literature of one or more disciplines.

Yet, to a surprising extent, existing bodies of literature in many fields focus on single discipline and seem to exist in a state of splendid isolation. Crossing to other discipline areas may be difficult to pursue and may be risky for researcher career. This is because many journals lack peer reviewers who are able to understand multiple disciplines. Thus, the review process for articles that combine several disciplines may have experts in specific discipline that may not understand the other discipline in the same article. Furthermore, those experts that are familiar with their traditional disciplines may devalue interdisciplinary work that is out of their disciplines. All these increase the difficulty of publishing interdisciplinary papers even though such studies solve problems in many fields without adequate explanations to some phenomenon in their discipline.

Nevertheless, the high potential to solve current theoretical or empirical problems that has confused other researchers motivates few scholars to try a new integrative theory that may be elegant and rich. Good theory integration can make high impact on the literature. Consider the development of behavioral economic field where economic researchers had the curiosity about the new findings about decision-making behavior in psychology discipline. These two disciplines provided conflicting explanations to people behavior as a result of different underlying assumptions. While scholars at the field of economy assume that people mostly act by following rational decisions, and if not, it is due to some feelings such as fear, hate, and affection, Kahneman (Nobel prize winner) and Tversky described, in many studies, other intuitive processes that are employed during decision-making that lead to systematic and predictable errors.

We contend that CDR is a potential way for scholars to advance their field and offer new insights that may help to solve a phenomenon-based problem, to develop knowledge, or when unexpected recurring pattern of findings appears in the literature, etc. For example, mergers and acquisitions (M&A) performance was studied by two different streams of management research with no consistent findings or specific conclusions about the main reasons for M&A success or failure. One stream studied the relationship between M&A performance and the strategic fit of the selling and buying firms. These studies hypothesized, but failed to find, a consistent relationship between performance and the degree of strategic fit at the M&A of their samples. Interestingly, the findings reveal large variance in the performance if M&A? with similar strategic fit, but have not given explanations for the large within-group variance. Another stream of research explored, conceptually and theoretically, possible relationship between culture fit of the buying and selling firms and M&A success by focus on its impact on employee motivation and attitude. Yet, these relationships remain without crystallize theory about the phenomenon.

In fact, in some reviews of the field Weber and his colleagues (e.g., Weber, 2010; Weber & Fried, 2011 Weber & Tarba, 2014) found that the major drawback of the M&A literature is that, while the M&A is a multileveled, multistage and multidisciplinary phenomenon, much of the research tends to be conducted at a single level (e.g., macro or micro), in a single stage (e.g., pre- or post-merger) and in single disciplinary (e.g., strategic management, or organizational behavior). No wonder that empirical findings were confusing, not consistent, and in many cases were contradictory.

Due to no adequate explanation for the observations and occurrences in the existing management theory that were described previously, Weber, 1996; Weber & Tarba, 2010, 2013, 2014; Weber, Tarba, & Oberg, 2014) sought answers in theoretical perspectives of other disciplines, such as anthropology, psychology (e.g., Weber & Schweiger, 1992) and international management (e.g., Weber, Shenkar, & Raveh, 1996). This helped, first, to crystalize thinking about the effects of cultural differences on people behavior phenomenon in M&A such as stress and negative attitudes of managers at the acquired firm, as well as commitment and cooperation of the acquired managers with the buying firm management, and second, to integrate theory from those outside disciplines in order to offer new way of seeing the phenomenon of variation in M&A performance.

By borrowing theories from the other disciplines and import them to their own disciplinary literature Weber and colleagues were able to perform theory integration that helps better understanding of the phenomenon in M&A. The “borrowing” concept was applied in their empirical studies to explore the relationships and knowledge flows between the scientific disciplines. In particular, it helps to demonstrate how the underlying concepts and methodologies of the culture and strategic fit streams (Chatterjee, Lubatkin, Schweiger, & Weber, 1992; Lubatkin, Schweiger, & Weber, 1999), when combined, make an important contribution toward understanding the M&A performance.

Our aim in this book, as well as in this series, is to advance scientific knowledge based on theories in other disciplines when there is curiosity about inconsistent or

contradictory findings, or to solve a phenomenon-based problem that confused scholars. Thus, this book's objective is to offer insights and examples of CDR for those who want to engage in CDR especially when researchers look for solving a puzzlement in the management and business administration literature where no good explanations exist and when they seek to offer an innovative and creative way of seeing an existing issue or phenomenon.

To this aim this first volume brings together an eclectic range of work that offers new insights for scholars in various disciplines. For example, it can be seen in the following chapters that prior investigations in many fields have not simultaneously embedded people into organizations and organizations into environmental contexts. Furthermore, while sharing some basic definitions and terminology, authors writing about various phenomena in their traditional discipline, by and large, have refrained from stepping into each other's turf, thereby missing out on opportunities for cross-fertilization. As was previously indicated the intent of this series is to encourage scholars to take a step forward and engage in CDR.

The first chapter of this book is a research that responds to the public expectations for high-quality healthcare for a new, more profound, and more actionable understanding of the healthy customer's mind regarding health-promoting behaviors. Gabay and Moskowitz use a Mind-Genomics that may become the next big idea of health services. Their research looks at the relation between Mind-Genomics and data-driven personalized health plans. Some of the findings are reported in this chapter.

The second chapter by Weber focuses on the paradox about the ongoing long phenomenon of increasing activity of both cross-border and domestic M&A versus their poor performance. He borrows concept from organizational ambidexterity stream of research to explore how different characteristics of M&A relate to different M&A implementation approaches. This helps him to provide various propositions that have the potential to foster future research directions.

In the third chapter, Rupo, Accordino, La Rocca, and Abbate use the new concept of business ecosystem that consists of several factors from different fields that influence the success of any business with focus on start-ups. They develop a theoretical model that combines different fields of research that include government considerations, educational institution, with the individual entrepreneur traits that include motivation, problem-solving agility, and other "soft" competencies. They provide propositions that may foster future research.

The fourth chapter by Bijaoui uses different models developed in international business and the international experience of small- and medium-sized enterprises (SMEs) to propose efficient ways of confronting globalization. Analyzing case studies that illustrate models of globalization, this chapter offers some proposals to help the SMEs in selecting a relevant international business strategy over time.

The next two chapters deal with gender diversity in managerial levels with theories from different disciplines and with different data sets that represent their different field theories and different organizational levels. Binder's chapter offers an insight into the relationship between the economic success of 50 European companies and the gender balance on supervisory boards. For this purpose her study builds upon literature in the fields of KPIs diversity management, supervisory

boards, and women quota. On the other hand, Goehlich, Gibertson, and Bremser combine macro- and micro-levels through the issue of corporate governance structure and the mentoring of women at German companies. Such mentoring can improve gender diversity at higher level of corporations with the potential of improving companies' performance in future.

In the following chapter, Dos-Santos and Diz present a study and data that combine several levels of investigation and several disciplines that include economy and strategy inquiry into Research & Development investments and impact. They collected data from several countries several industries, and several levels of high-tech industries. The main results of their study highlight the impact of corporate R&D strategy on productivity of high-tech industries and the need for a policy and decision-makers to allocate public funds for R&D in high-tech industries, while the investment in capital seems crucial particularly in low-tech industries in order to improve productivity.

Next, Lousas, Ribeiro, Alves, and Veloso's chapter presents a study of the olive oil consumption and economic sector in Portugal and Spain. This is done by the examination of various areas of interest from production to retail and consumption.

The chapter by Iovino and Migliaccio focuses on e-marketing and strategy by energy companies. This chapter shows how e-marketing and e-strategy constitute tools for a public service such as energy priority that helps to achieve the objectives of liberalization and privatization.

The next chapter by Ataay, based on data from Turkey, investigates the effects of pay dispersion between executives and employees of an organization on the firm performance. The study focuses on vertical pay dispersion, which reflects intra-firm and vertical differences between pay at two important hierarchical levels, namely combining top executive level and lower hierarchical level.

The Simillidou, Vrontis, and Christofi's chapter combines different research areas. One area investigated is the behavior of employees in their organization while another area is stakeholders that are out of the organization, namely customer behavior. They develop a framework for the scholar community and management practice in the hospitality industry and propose various avenues for further research.

The chapter by Larisa Mihoreanu seals this volume by providing directions of actions to strengthen medical reputation and care partnering. It suggests complex analyses of composite indicators from various disciplines that facilitate the ranking of their achievements from financial and medical point of view.

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Chapter 1

“Are We There Yet?” Mind-Genomics and Data-Driven Personalized Health Plans

Gillie Gabay and Howard R. Moskowitz

Introduction

Predictive analytics (PA) is the branch of data mining concerned with the prediction of future probabilities and trends (Lee, 2013). The central element of PA is the *predictor*, a variable that can be measured for an individual, in order to predict future behavior. When multiple predictors are available, they are combined into a predictive model, which, when deployed by the service provider, can be used to forecast future probabilities of outcomes with an acceptable level of reliability. In predictive modeling, data are collected, a statistical model is formulated, predictions are made, and the model is validated and revised as additional data become available (Eckerson, 2007).

PA is applied to many research areas, including meteorology, security, genetics, economics, marketing, and recently to health (Gabay, Moskowitz, Onufrey, & Rappaport, 2017). In this study we focus on PA and health and more specifically on PA and delivery of health-care services. We demonstrate the ability of health funds to discover mind-sets of patients with respect to a topic; to use PA to assign a person in the population to a mind-set in the sample; and to thereby use the right messaging for each patient. The relation between PA and messaging used by health plans has not been investigated and is the focus of this chapter.

Health funds have been consumed by care of the sick rather than with preventive health care. Health systems promote health through epidemiology which builds and examines clinical outcomes at population level. Data systems do not enable access to patient treatment outcome that may be compared to one's previous outcomes or to outcomes of a group of patients with the same specific health conditions. Even if physicians had access to these comparative massive amounts of data for all diseases, they would need time and expertise to analyze the information and integrate it with the patient's own medical profile. This in-depth research is beyond the scope of a physician's grasp, particularly facing today's global shortage

in physicians and austerity of health systems (Crisp & Chen, 2014). Shifting the focus from treatment to prevention and incorporating the “mind” of the patient in health plans, health funds will be able to better understand what promotes health and how to avoid illness at patient level. PA may revolutionize the way medicine is practiced today for better health, higher disease reduction, and personalized health plans (Kohane, Drazen, & Campion, 2012).

Looking Forward – The Value of PA

PA promotes health by predicting clinical outcomes for individual patients. PA differs from traditional statistics and from evidence-based medicine in several ways. First, predictions are made for individuals and not for groups, with the ability to predict behaviors (McEachan, Conner, Taylor, & Lawton, 2011). Second, PA does not rely upon a normal (bell-shaped) curve as what may work best for people in the middle of a normal distribution may not work best for an individual patient who seeks treatment. PA may include data from outcomes of past treatment as well as from the latest medical research published in peer-reviewed journals and databases.

PA not only helps with predictions, but may also reveal surprising associations in data. PA may increase the accuracy of diagnoses of patients at the emergency room in cases that is difficult to know whether the patient should be hospitalized. If physicians were able to answer questions about the patient and her or his condition using a system with a tested and accurate predictive algorithm, then the likelihood that the patient could be sent home safely may be assessed in order to support and assist the judgment of the physician (Miner et al., 2014). Predictions can range from responses to medications to hospital readmission rates. PA can help physicians decide the exact treatments for each patient, ruling out unnecessary potentially dangerous treatments that will not work for a certain individual. Better diagnoses and more targeted treatments will naturally lead to increases in good outcomes and to lower depletion of increasingly scarce resources, such as the increasingly rare time of attending physicians.

PA will also promote preventive medicine and public health. With early intervention, many diseases can be prevented or ameliorated. PA may allow primary care physicians to identify at-risk patients within their practice. With that knowledge, patients can make lifestyle and behavioral changes in order to avoid risks (Armstrong et al., 2007). As lifestyles change, population disease patterns may dramatically change resulting in savings in medical costs (Chin et al., 2012). Also, future medications might be designed just for a certain person as PA methods will sort out what works for people with similar subtypes and molecular pathways. The patient role will change as patients become more informed. Patients who will collaborate with their physicians are expected to achieve better outcomes. Patients will become aware of possible personal health risks sooner. Beyond the knowledge of the personal genome as a source of information we have the increasing use of apps and medical devices (i.e., wearable devices and monitoring systems) and consequently more accurate and up-to-date information. The positive outcome is that patients will have the right knowledge to help