



Theory development process and the fundamental *explananda* of strategy

Nobuiuki Costa Ito^{1*}, Fernando Antonio Prado Gimenez² e Paulo Hayashi Junior³

¹Universidade de São Paulo, Ibmecc São Paulo, Alameda Santos, 2356, 01419-002, São Paulo, São Paulo, Brasil. ²Universidade Federal do Paraná, Curitiba, Paraná, Brasil. ³Faculdade de Ciências Aplicadas, Universidade Estadual de Campinas, Limeira, São Paulo, Brasil. *Autor para correspondência. E-mail: nobuiuki.ito@ibmec.edu.br

ABSTRACT. The purpose of this essay is an exploration of the current scientific status of the Strategic Management field. This essay is an attempt to open up the debate within the philosophy of strategy science, which means that the aim is to clarify critical issues related to research rather than explaining strategic phenomena. Hempel and Oppenheim's (1948) description of explanation is the chosen framework structure as it involves the constitutive elements of a theory, as well as providing a synthesis of these elements in a single *explanandum*. Five main phenomena are described as the fundamental *explananda*, namely: (i) competitive advantage; (ii) strategic levels; (iii) the strategic process; (iv) strategy implementation; and (v) social outcomes. Relationships between these elements are assessed and commented. The paper's purpose is not to describe a general theory of strategic management, but to induce scholars to question certain issues.

Keywords: theory; *Explananda*; strategic management.

Processo de desenvolvimento teórico e as *explananda* fundamentais da estratégia

RESUMO. O objetivo desse ensaio é explorar o status científico atual do campo da Administração Estratégica. Esse ensaio é uma tentativa de abrir o debate na filosofia da ciência da estratégia, o que significa que a meta é esclarecer assuntos centrais relacionados à pesquisa ao invés de assuntos relativos à explicação dos fenômenos estratégicos. A descrição de explicação de Hempel and Oppenheim (1948) é a estrutura analítica escolhida pois envolve os elementos constituintes de uma teoria, bem como prove uma síntese de tais elementos em um único *explanandum*. Os cinco fenômenos principais da estratégia são descritos como *explananda* fundamentais, a saber: (i) vantagem competitiva; (ii) níveis da estratégia; (iii) processo da estratégia; (iv) implementação estratégica; (v) resultados sociais. As relações entre os elementos são avaliadas e comentadas. O propósito do estudo não é descrever uma teoria geral da administração estratégica, mas induzir pesquisadores à questionar aspectos centrais do campo.

Palavras-chave: teoria; *Explananda*; administração estratégica.

Received on August 4, 2018.
Accepted on December 8, 2018.

Introduction

It can be argued that the strategic management field made early developments towards a non-theoretical path, which emphasized practice and was carried out by consulting firms (e.g. the Boston Consulting Group and McKinsey & Co). Despite the central role played by the Harvard Business School as a research and education institution, in general, strategy scholars sought to develop managerial tools – such as SWOT analysis, the BCG Matrix, the Ansoff matrix, the learning curve and others – rather than theories, in an attempt simply to reproduce a particular successful firm's strategy in other companies (Ansoff, 1965; Ghemawat, 2002). Despite the immediate impact on business practices, the chosen path prevented genuine thought and reflection concerning the fundamental issues of the strategic phenomenon. Basic tasks, such as delimiting field domains and frontiers, proposing theoretical assumptions, highlighting the object or unit of analysis and defining methods, were not completely fulfilled.

The result of this state of affairs is a field in which research programmes include a broad range of investigative efforts in which there is a prohibitive number of critical elements regarding the strategic phenomenon, and a diversity of theoretical grounds (or researcher's lenses). As a consequence of this lack of

an explanatory apparatus, the backbone of the field is questioned (Mintzberg, 1994) and – thinking about the progress of the field – one can observe little theoretical accumulation and a degree of academic disillusionment about the value of the existing literature (Volberda, 2004). Under Kuhn's analysis, the strategic management field can be categorized as being in a pre-paradigmatic state as “[...] [t]he pre-paradigm period, in particular, is regularly marked by frequent and deep debates over legitimate methods, problems, and standards of solution, though these serve rather to define schools than to produce agreement” (Kuhn, 1962-1970, p. 47-48).

The purpose of this paper is to explore the current scientific status of the Strategic Management field. This essay is an attempt to open up debates within the philosophy of strategy science, which means that the aim is to clarify critical issues concerning research rather than explaining strategic phenomena. In other words, as a philosophical effort, this essay does not intend to outline the general theory of strategy. Instead, adopting a philosophical approach grounded in the scientific structure of the natural sciences, we offer an assessment of the theoretical development as well as the interconnection of its constituent parts. We hope this initial attempt will foster new discussions addressing the alleged lack of theoretical backbone and consequently the poor understanding of strategic phenomena and the fragile empirical support of its main theories. Thus, this essay is an attempt to provide some thoughts on the developmental stage of strategy as a scientific field.

Theory development: a system of explananda

The primary function of science is not to transform the world or build a better world, but rather to understand the world. Understanding, comprehending and explaining a phenomenon is part of the nature of science, aiming to establish causal relationships and facilitate, in a sense, the ability of prediction (Kerlinger, 1979). The main function of the philosophy of science, in turn, is not the explanation, but rather the clarification. Questioning issues related to the definition of science, the understanding of the logical structure, theories, methods and the implications of scientific investigations are the concerns of philosophy in this area (Klemke, 1998). Thus, we argue that one of the most important purposes of science is theory building and an important function of the philosophy of science is the assessment of the theory-building process. In this line, the first step is to develop a proper lens with which to analyze the theory-building process in strategic management.

However, what is a theory? Simply put, a theory is a logical construction to explain a given phenomenon, which departs from some assumptions, stating concepts and how and why these concepts interrelate with each other to understand a phenomenon (Corley & Gioia, 2011). Whetten (1989) points to three building blocks of a theoretical contribution: (1) ‘what’, i.e. the factors relevant to a particular phenomenon; (2) ‘how’, referring to the way(s) in which the relevant factors interrelate; and (3) ‘why’, explaining the dynamics justifying the selection of the relevant factors and their cause-effect relationships. It is an understanding that goes beyond common sense in the explanation of a phenomenon (Sutton & Staw, 1995).

Within the developmental process of a scientific field, theory-building blocks emerge progressively through the collective work of researchers, articulated in papers and book publications and debates at conferences and seminars, which leads to consensus-based knowledge. The harder and perhaps most fruitful contributions in theory building are within the ‘why’ block (Whetten, 1989), considering that a robust theory involves a deep and systematic understanding of the reasons for the occurrence or the non-occurrence of a phenomenon, supported by consistently interconnected arguments.

The explanations of the phenomenon, according to Hempel and Oppenheim (1948), can be broken down into two constituent aspects: the *explanandum*¹ and the *explanans*. The *explanandum* is a statement that describes the phenomenon, whereas the *explanans* is the set of statements that drive the description of the phenomenon, which can be law-like claims and the information of the antecedent conditions. It means that an *explanandum* must be logically deduced from the *explanans*. The *explanans* has two subclasses: the first is the antecedent conditions that have previously been assumed to explain the phenomenon; the second comprises the general laws capable of predicting the event.

¹ *Explananda* is the plural form of *explanandum*.

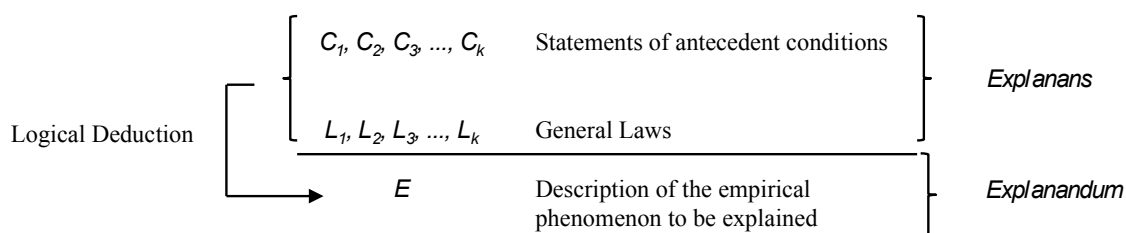


Figure 1. The logical structure of explanation (Hempel & Oppenheim, 1948).

The characterization offered by Hempel and Oppenheim (1948), as Figure 1 shows, can clarify the evaluation of explanation, as well as be useful as a theory-building guide. Hempel and Oppenheim (1948) acknowledged that there are some gaps in the employment of this analysis of explanation in the social sciences. Taking into account the complexity of phenomena involving human behaviour, it is harder to make law-like claims (generalizations), as we can find in physics or chemistry, for example. Nonetheless, the authors also acknowledge the overreaction against the application of the rationale to social and human sciences. For instance, Hempel (1942) discusses the function of general laws in the study of History. Thus, despite the reservations, we claim that it is possible to apply the explanatory logical structure to strategic management enlightened by its *explananda*, even if there is some looseness concerning objectivity and mathematical rigor. This claim is also based on two aspects. First, Kuhn (1998), revisiting the process of scientific endeavor in the social sciences vis-à-vis the natural sciences, posited that the social sciences (or human sciences, in his terms) seem to present a hermeneutic base, whereas the natural sciences follow puzzle-solving research, at least in normal science² periods. Despite this initial examination, Kuhn recalled that two centuries ago, chemistry suffered from the very same problem as the social sciences today, regarding the impossibility of puzzle-solving research. He also remarked that parts of some fields in the human (social) sciences perhaps already apply puzzle-solving research, for example in economics and psychology. Thus, there is no doubt that there are frontiers between the natural and social (human) sciences, but this division line allows some overlaps, in terms of scientific structure of theories and methods.

Second, taking advantage of Kuhn's statement concerning the scientific status of economics, which is close to the structure of the natural sciences like physics (Mirowski, 1989)³, we emphasize that mainstream research on strategic management is deeply grounded in economics (Mahoney, 2005). For instance, the environmental and resource perspectives of competitive advantage – a central concept in the strategic management field – are built on different economic backgrounds, such as industrial organization (Porter, 1981), the theory of firm growth (Penrose, 1959), factor markets (Barney, 1986), microeconomics and the theory of rents (Barney & Peteraf, 2003).

Although the logical structure offered by an *explanandum* is related solely to the explanation of a certain phenomenon, we argue that a more general theory could be derived from this rationale. We already advocated that an *explanandum* assembles all the characteristics of a theory, such as the relevant factors and the description of the interacting mechanisms among factors to produce an expected result. Thus, a set of few inter-related *explananda* could generate an even more general theory, which encompasses a whole scientific field. This conclusion is shared with Hunt (1983, p. 14), stating that “[...] to be successful [in building a general theory of Marketing] would be the procedure of developing a general theory for each of the [...] sets of fundamental *explananda*, and then integrating each of the [...] theories into one comprehensive schema”.

Thus, assessing set of a few interrelated *explananda* that – in a general manner – explain the fundamental issues of the whole scientific field, can be useful to evaluate a broader theory development process. This general perspective provides a systematic framework that goes beyond the explanatory power of an individual phenomenon. The *explananda* allow the merging of several theories into a single explanation. Keeping these ideas in mind, we can consider the strategic management field and its main potential issues.

² Normal science is the stage when scientific inquiries are carried on without challenge the underlying assumptions of the theories, because the current paradigm is settled. The normal science stage corresponds to the regular work of the scientists, when they observe and conduct experiments within a consolidated framework and methods. It is a sequence of efforts for confirming theories rather than challenge its assumptions.

³ We acknowledge that economic theory, different from physics, is built upon assumptions on human behaviour. In this sense, phenomena in economics present different nature when compared to physics. Nevertheless, grounding in Mirowski (1989), we claim that physics and economics are similar in terms of theoretical structure and, especially, mathematical formalization.

The fundamental *explananda* of strategy

The strategic management field was born in the early 1960s and was known at the time as business policy. Three books – Chandler (1962), Learned, Christensen, Andrews and Guth (1965) and Ansoff (1965) – formed the cornerstones of early strategic management, adopting an approach that went beyond multifunctional integration (Hoskisson, Hitt, Wan & Yiu, 1999). Since then, almost 50 years of research and debate have passed, arriving at a multidisciplinary field, with little consensus and a fragile theoretical apparatus. Hoskisson et al. (1999) compared the developmental path of the field to the swing of a pendulum, in that the focus has shifted continuously between the internal perspective and the environmental (i.e. external) perspective. This alternating focus has created conflicts and confusion regarding concepts and methods, paving the way for a variety of disciplinary grounds, especially in economics, sociology, psychology, management and organizational theory.

This diversity is reflected in the different approaches and schools of thought that can be found in the field. Based on a deliberate or emergent process and profit-maximizing or pluralistic outcomes, Whittington (1993) classified the production of the area into four approaches: (1) classical, (2) evolutionary, (3) processual and (4) systemic. An even broader classification was presented by Mintzberg (1990), consisting of ten schools of thought in strategic management which deal with different processes of strategy formation: (1) design, (2) planning, (3) positioning, (4) entrepreneurial, (5) cultural (6) cognitive, (7) environmental, (8) learning, (9) power and (10) configuration.

Despite this fragmented field, organized in several schools of thought and employing a variety of theoretical backgrounds, scholars have paid little attention to the implications of this structure for the scientific status of the field. Rather, philosophical inquiries in strategic management emphasize the logical structure of the arguments within its main theories (Duran, 2002; Powell, 2001, 2002), or epistemological positions in strategy research (Mir & Watson, 2000) with implications for methodological choices (Brønn, 1998). In contrast, this essay focuses on a broader question, examined through a specific lens, which is how a bundle of *explananda* might provide an evaluative lens of the overall scientific status of the field.

Fundamental *explanandum* 1 (FE1) – competitive advantage: the attainment and sustainability of competitive advantage occur simultaneously through the exploration of a firm's internal and external sources

In the strategic management literature, there are two streams of thought that explain competitive advantage, Porter's models or the Porterian approach (Porter, 1980, 1985, 1996) and resource-based view (RBV) (Barney, 1991; Peteraf, 1993; Rumelt, 1984; Teece, Pisano & Shuen, 1997; Wernerfelt, 1984). In the Porterian approach, competitive advantage is achieved by means of the unique position of the firm within its industrial structure and the consequent protection of and/or actions of the firm in relation to the environmental competitive forces that undermine the firm's performance. The RBV, in turn, focuses on firms' heterogeneity in terms of the cultivation, development and accumulation of an idiosyncratic set of specific resources – analysed by the attributes of value, rareness, inimitability and organizational (VRIO framework) (Barney & Hesterly, 2006) – resulting in sustainable competitive advantage.

These two different approaches focus on different sources of competitive advantage. While the Porterian approach builds up an analysis of industrial structure and the firm's positioning within its environment, the RBV adopts an internal perspective, in as much as the set of a specific kind of resources available to the firm is the explanation of its sustainable competitive advantage. The assumptions of industrial organization economics, which underlie the Porterian approach, are not in accord with the RBV assumptions outlined by Barney (1991).

The investigations carried out by Rumelt (1991) and McGahan and Porter (1997) draw attention to several dimensions which have a significant impact on firm performance, such as industry and business-specific features (resources). These studies represent disputes between the Porterian approach and the RBV in terms of identifying the best explanation of competitive advantage, promoting divisions that can only turn the field into explanatory islands. The rival and mutually exclusive treatment of these approaches is an obstacle to transforming the islands into a continent.

The change in focus from the distinction between internal and external sources of competitive advantage to a fit between them could be an initial step in achieving consensus. Indeed, RBV theorists recognize the potential complementarity between internal and external lenses (Barney, 1991; Mahoney, 2005; Hayashi, Ito, & Gimenez, 2015), but this recognition has not translated into action. Competitive advantage is the most frequent and main theme in the field and it can contribute to the field's identity and the definition of its domains and borders.

Fundamental *explanandum* 2 (FE2) – strategy process: the formation of competitive advantage is a socially complex process, involving power relations, institutional approaches and social practices

The investigation of competitive advantage naturally rests on an economic perspective. The 'half-brother' term 'comparative advantage' is usually applied in economics and the measurement of firm performance as economic rent is a recurring feature. Nevertheless, we cannot just consider the purely economic perspective, but rather need also to elicit the social relations composite involved in the process of strategy formation. Disregarding social components fails to take advantage of opportunities to reveal the 'how' and 'why' building blocks of the theoretical contribution.

Strategy can, therefore, be seen as a process that deals with the social interaction between different actors. The exploration of social and political aspects that are not quantified can be a useful and clarifies the formation process of an advantageous competitive position (Hirsch, Friedman & Koza, 1990). In current investigative efforts, this leads to a descriptive perception of the strategic phenomenon rather than a normative approach. In this context, sociology, social psychology and organizational studies are especially important. The complexity of the phenomena in this *explananda* is greater than in the previous instance, which implies different methodological decisions, as well as different theoretical structures.

The economic perspective of strategy and the remarkable characteristics of the classic approach, which separates action from formulation, are now being broadened, turning to a continuous process of learning in which formulation and action are concomitant and path dependent (Mintzberg, 1987), emerging in day-to-day firm organization (Mintzberg & Waters, 1985). Thus, the analysis draws on the behavioral features of the firm (Cyert & March, 1963), in a logical incrementalism (Quinn, 1978) involving the organization's micro-politics (Pettigrew, 1973), managerial work (Mintzberg, 1990), social practices (Jarzabkowski, 2005; Johnson, Langley, Melin & Whittington, 2007; Whittington, 1996) and the roles of cognitive neuro-science (Powell, 2011; Powell, Lovallo & Fox, 2011) and leadership (Anning-Dorson, 2018) in dealing with complex contexts.

Henry Mintzberg is perhaps the founder scholar of theories of the strategy process. Inspired by the theoretical grounds of organization studies (Barnard, 1938; Simon, 1961; Weick, 1979), the author focuses on the idea of strategy as pattern in actions. Investigations are carried out through in-depth and longitudinal case studies (for decades in some cases) with a lot of data collection in order to build a general theory of strategy formation (Mintzberg, 2007). Indeed, Mintzberg's work to gather a general theory of strategy process is a lonely effort in this direction.

Other recent efforts are not connected to previous works, like the strategy-as-practice (SAP) concept (Whittington, 1996). It has emerged as a new perspective that addresses strategy not as a property of the organization, but as something that people actually do within the organizations, relating it to daily management and the people who manage the firm. SAP is conceived as "[...] a concern with what people do in relation to strategy and how this is influenced by and influences their organizational and institutional context" (Johnson et al., 2007, p. 7). SAP stresses the fundamental role of action in strategy and also the (un)conscious choice of how to act before taking action. Even more recently, strategy scholars are advocating that new lenses such as cognitive and social psychology (Powell, Lovallo & Fox, 2011), complex organizations (Anderson, 1999; McKelvey, 2010; Hayashi, 2009) and brain research (Powell, 2011) have important implications for the strategy field. These efforts focus on the process of self-organizing, judgment, and decision-making undertaken by executives. Thus, if the executive behavior is in the game, his/her brain and the cognitive and social psychology in the practice of strategic decisions within enterprises are keys to an understanding of the strategy process. It is a new venture in strategy research, which insert a more complex feature found in human behavior.

Fundamental *explanandum* 3 (FE3) – strategy levels: the achievement of competitive advantage depends on a multilevel alignment

Considering again the work of Rumelt (1991) and McGahan and Porter (1997), the corporation parent also has significant effects on firm performance. Strategy is a phenomenon intertwined in multilevel domains in which it is possible to distinguish corporate strategy (e.g. diversification or merge and acquisitions), business-unit strategy (e.g. positioning) and functional strategy (e.g. marketing strategy or human resources strategy) (Camargos & Dias, 2003). The role played by strategic alignment in the attainment and sustainability of competitive advantage is thus a central theme for a theory of strategy.

In the corporate level, on the one hand, most of the investigation efforts remain in the empirics of diversification and merge and acquisitions. For instance, a classical study in this area incorporate variables of both market structure and diversification, finding some categories of diversification matters to corporate economic performance (Christensen & Montgomery, 1981). On the other hand, scholars sought to develop tools to manage a portfolio of business-unit firms, evaluating the characteristics of each business and the role in the portfolio, for example, the BCG matrix. In the business-unit level, attempts are related to the creation of toolkits to strategic management, employing insights of both fundamental *explananda* 1 and 2, as well as issues of corporate strategy (Hitt, Ireland & Hoskisson, 1997; Johnson, Scholes & Whittington, 2008), but with no theoretical or empirical sophistication. At last, at the functional level, following the business-unit trend, many scholars sought to develop toolkits applying strategy tools to the characteristics of each managerial functions, such as marketing (Martin, Javalgi & Cavusgill, 2017), human resources (Delery & Roumpi, 2017), production and operations (Wu, Tseng, Chiu & Lim, 2017), among others.

Fundamental *explanandum* 4 (FE4) – strategy implementation (planning and control systems): competitive advantage depends on the execution of activities by the whole organization, controlled by the top managers

Managers play a central role in the internal organization and the strategic initiatives of the firm (Nag, Hambrick & Chen, 2007). Turning back to the classic approach to strategy, there is an important and central recognition of the role of top managers (Ansoff, 1965). Researchers have sought to understand the importance of CEOs and top management team for strategic actions and firm performance (Shepherd, McMullen & Ocasio, 2017). Unlike the market, the firm is not a self-coordinated organism guided by an invisible hand. The ‘manager’s hands’ are the coordinating center for resource allocation within the firm, aimed at achieving a common and preconceived goal (Chandler, 1962). Thus, planning systems, whether formal or informal, and the control systems adopted during strategic implementation are critical in obtaining competitive advantage. In effect, the administrative center goes hand in hand with the application of the firm resources and takes steps to make the necessary corrections. In this flow of activities, the organizational structure affects the firm’s behavior, and the type of organization adopted is related to the value creation (Keats & O’Neil, 2001) and change (Amburgey & Dancin, 1994).

As an execution perspective, the monitoring of the implementation is critical to this theme. A control system, therefore, involves a complex measurement system, which deals with quantifiable and unquantifiable dimensions and tangible and intangible aspects of the firm that goes beyond the ordinary finance indexes and accounting demonstrations. The ‘balanced scorecard’ (Kaplan & Norton, 2004) had long influenced the managerial tools to monitor multiple measures, such as the financial perspective, the internal business perspective, the innovation and learning perspective and the customer perspective. Moreover, the balanced scorecard can constitute an illustrative tool for the whole strategic planning of the firm through representation using strategic maps (Kaplan & Norton, 2004).

Fundamental *explanandum* 5 (FE5) – social outcomes: the pursuit of superior performance puts strategic management in conflict with socially desirable outcomes but also produces beneficial macro-outcomes for society

Finally, there are aggregate approaches in strategy, for example, related to the competitive advantage of regions or nations, as represented in Porter’s (1990) Diamond Model. In such approaches, an increase in the productivity and innovation of clustered firms (Porter, 1998; Lima, 2011) can create fruitful social outcomes and promote regional economic development. Contradicting the allegations against Porter’s (1979) five

competitive forces model, which can be interpreted as a useful framework to examine market power resulting in welfare losses (Barney, 1991).

Conflicts between damages to social welfare and nation development arise from these arguments, but we advocate that strategy has unknown and positive social outcomes promoted by persistently superior performance. For instance, corporate social responsibility received attention since 1990s and empirical findings suggest positive association to financial performance (Orlitzky, Schmidt & Rynes, 2003). Moreover, there is an emergent agenda in the field, such as the relationship between competitive advantage and social impact (Porter & Kramer, 2002) and the reliance between private and public interests, regarding the interdependence between sectors (Mahoney, McGahan & Pitelis, 2009) and partnerships between sectors (Kivleniece & Quelin, 2012). Also, recent developments related to the role of firms in achieving global sustainable development (Elkington, 1997; Hart, 2005; Hayashi, 2009) have to be considered as relevant to solve the potential conflict between firms' desired economic goals and wider desired social and environmental outcomes. The last *explanandum* connects strategic management to public policy and public interest issues.

Discussion: a theory development process should interconnect *explananda*

We have discussed five important phenomena in the strategic management field in the shape of an *explanandum* for each one. However, in order to constitute a coherent scientific development process, these *explananda* must be integrated. These pieces should acquire meaning when integrated into a whole, like plots of lands to be joined in a continent of solid ground. In this essay, the primary motivation is the idea that strategic management field failed in structuring a theoretical apparatus, due to the urgency of solving practical managerial puzzles. Wondering if this argument is correct, we must evaluate the theory-building process through the benchmarking generated by the theory as a set of *explananda*.

Lack of consistency within the *explananda*

It is hard to explain these cause–effect relationships within each aforementioned *fundamental explananda*, i.e. internal consistency among *explanans*' descriptions. As described in the previous section, there are two different and disputing approaches to competitive advantage (*Explanandum #1*), Porterian approach and RBV. These two streams of thought present conflicting assumptions (Barney, 1991), especially regarding the nature of the firm resources and transferability of resources, meaning that the different approaches rely on conflicting *explanans*. Despite disagreements on the *explanans*, these theoretical lenses provide a consistent single first *explanandum*, which concerns with the explanation of sustainable competitive advantage. Perhaps, the approaches achieve the same end using different means, and the reconciliation faces important obstacles from its foundations.

The second *explanandum* presents the strategy process (*#2*). The complexity of strategy phenomena is revealed by this second fundamental *explanandum*. This complexity, notwithstanding, is addressed by even more diverse theoretical background, when compared to the first *explananda*. Individual behavior is part of the investigation, applying psychology, sociology, and cognitive neuro-science. In this endeavor, a different set of *explanans* dispute for a space behind the curtain, and the creation of a logical theory for this particular aspect of the field became harder. However, different from FE1, the competing *explanans* generates a single consistent *explanandum*, recognizing the processual perspective of the phenomenon.

In *Explanandum* of strategy levels (*#3*), the analysis of each level is dealt separately, i.e. there is no effort to understand the alignment of the levels, but scholars are trying to understand how strategy works in each level. Thus, in fact, there is no developed *explanandum* for the alignment among strategy levels, but three different *explanandum* accounting the operation of each level. The *explanandum* stated in the previous section cannot hold if logically deduced from the *explanans*. Thus, in FE3, there is no competition among *explanans*, but rather different *explanans* achieving a distinct set of *explananda*. In this case, the effort of creating a consistent *explanandum* are greater than the previous ones.

The strategy execution is the target of the fourth *explanandum*, raising issues related to manager's role, organizational structure, and/or implementation tools. Similar to fundamental *explanandum #3*, this fourth *explanandum* also presents a fragmented structure for the description of the observed phenomenon to be explained. It is not clear if the execution has to do with the role of key-persons (leaders, top managers), or

the application of suitable organizational structures and/or control systems. Summarizing, the inability to connect different *explanans* into an *explanandum* is also challenging in this case.

Finally, the FE5 is the least developed theme in strategic management. These topics are related to countries, regions and social outcomes, and have received less attention in the field because it is not directly related to the centre matter, which is competitive advantage. Social responsibility or competitive advantage of nations are widely recognized, but social impact or the reconciliation of public and private interests are incipient issues in this area. Thus, it is not possible to outline the main *explanans* yet. Actually, the aforementioned *explanandum* for this theme presents an ambiguous effect, as models of strategic management can produce welfare losses on some occasion or social gains on other occasions. Thus, the incipient stage cannot indicate a clear diagnosis of this *explanandum*.

Some attempts to integrate the *explananda*

It is an even more difficult task to outline the relationships among the *explananda* (Bignetti & Paiva, 2002). However, a theory development process in strategy field should comprise a solid continent rather a collection of islands, and it should describe potential interconnections as required. One explanation should reinforce another. According to Hunt (1983), generally, a scientific field can be conceived in two structural forms: a hierarchical form or a collection of sub-theories. Looking at the described set of *explananda*, it is not clear whether a hierarchical relationship fits with it or not, but, it is possible to indicate the first *explanandum* as a central issue in the field.

The competitive advantage is a topic that appears with the most significant bibliometric impact (Ramos-Rodríguez & Ruíz-Navarro, 2004; Nerur, Rasheed, & Natarajan, 2008). Besides, the central Strategy's question about why some firms outperform others is inevitably explored by the competitive advantage (Porter, 1980; Barney & Hesterly, 2006; Bertero, Vasconcelos & Binder, 2003; Hayashi, Ito & Gimenez, 2015). Due to the key role of the concept of competitive advantage in the mainstream strategy research, in our evaluation, we put FE1 at the center of the field. The starting point in the evaluation of a theory development process, therefore, is competitive advantage, which has economics as the predominant theoretical grounding. Competitive advantage could be a backbone of the field, providing a common language for theory development.

Competitive advantage, as the core of the theory of strategy, is the ultimate goal of all strategic action and the strategy process' *explananda* are the means of attaining and maintaining it. Thus, the conversation among *explananda* through a common base, competitive advantage, should be explored, i.e. interconnection among *explananda* #1 and #2. First, the strategic process discovers how firms create and sustain competitive advantage through mechanisms that enable them to pursue advantages over their competitors; this is useful in suggesting how firms might organize activities within and between firms (FE2). Nevertheless, connecting FE1 and FE2 is not simple, because it enacts the dichotomy process versus content (Chakravarthy & Doz, 1992), and the conflicts of this paradox inhibit the fast approximation.

The strategy process should also encompass the organization of firms' activities relating to the structures of authority, information flows and other aspects regarding the corporate, business unit and functional levels. In other words, it should connect the *explananda* #3 and #4. The alignment of these multilevel dimensions (FE3) starts to put strategic activities in motion, demanding a monitoring system and control mechanisms during the implementation stage (FE4). In effect, the definition of the strategy (FE1) should be accompanied by a process (FE2) of alignment (FE3) in which managerial tools should be employed to enable the organization through control systems during execution (FE4). It is possible to assert that the dichotomy between formulation and implementation is associated with the lack of connection throughout the *explananda* from #1 to #4, because it is not possible to draw a continuous track from formulation to implementation.

For, the discussion allows the representation of the strategy's theory development process as a mix of these two forms, collection of sub-theories and hierarchical form, as a collection of sub-theories (the *explananda*) is connected to a central landmark (more important in the hierarchy), the *explanandum* of competitive advantage. The first fundamental *explanandum* of competitive advantage comprise the backbone for other *explananda*. Taking into account the pluralism in the area, theory development process emerges from multiple disciplinary grounds, so the identification of a common position among all *explananda* may provide a common language.

Concluding remarks

Strategic management is still a young scientific field, and it is in a pre-paradigmatic state. The evaluation performed in this essay leaves a feeling that the practice-oriented path urged researchers for providing answers instead of explanations (theories). The conclusion of the assessment is that the formation of big themes in the strategy literature (*explananda*) was not accompanied by the structuration of the logical construction of phenomena explanations (*explanans*). The understanding of the mechanisms that govern persistently superior performance remains the ‘holy grail’ of strategy, i.e. it is something miraculous that everyone pursues, but no-one knows if it really exists. Thus, taking into account the current scientific status of the field, we found a fragmented state, with poor interconnection among efforts, justifying the suspicions raised on the validity of theories and tools.

It is difficult to fill the gaps in theory development as the various research perspectives are rarely interposed. Nowadays, we have ‘applied strategy’ in the place of a ‘theory of strategy’. For instance, despite the theoretical refinement of the resource-based theory of the firm (Barney, 1991), the fragile empirical support (Newbert, 2007) for it raises questions about the validity of its main arguments (Priem & Butler, 2001). Furthermore, there is a lack of theoretical linkage between firm-level specificities and corporation-level specificities in explaining superior economic performance, i.e. linking competitive strategy to corporate strategy.

The fragmented and dichotomized features of the field hinder theory building, but avoiding these conflicts and dichotomies feeds the confusions in the strategic management literature, making room for gurus with magic forecasting abilities. In practice, these lack of theoretical apparatus open space for all sort of managerial tools, creating some kind of periods of fever, when several enterprises adopt it. Sometimes, this massive adoption of management practices is called management fad, meaning the replication of managerial tools no matters the clear understanding of its results. These replications are, frequently, related to consulting firms, IT systems, and business gurus. Many managerial tools once for a while are recalled as management fad, such as strategic planning (Gray, 1986; Mintzberg, 1994), total quality management (Brockman, 1992), six sigma (Antony, 2007), among others.

Thus, it is necessary to explore each *explanandum* in order to map their main theoretical backgrounds and their *explanans*. This task is useful to exercise our mind rather than solve the problem. Thus, the paper’s idea is not to describe a general theory of strategy, but to induce scholars to question certain issues. Meditating on the actual scientific status of the field may be required to support the activity of inquiry faced by us – strategy scholars – every day.

References

- Amburguey, T., & Dancin, T. (1994). As the left foot follows the right? The dynamics of strategic and organizational change. *Academy of Management Journal*, 37(6), 1427-1452. Doi: 10.2307/256794
- Anderson, P. (1999). Complexity theory and organization science. *Organization Science*, 10(3), 216-232. Doi: 10.1287/orsc.10.3.216
- Anning-Dorson, T. (2018). Innovation and competitive advantage creation: the role of organisational leadership in service firms from emerging markets. *International Marketing Review*, 35(4), 580-600. Doi: 10.1108/imr-11-2015-0262
- Ansoff, H. I. (1965). *Corporate strategy*. New York, NY: McGraw Hill.
- Antony, J. (2007). Is Six Sigma a management fad or fact?. *Assembly Automation*, 27(1), 17-19. Doi: 10.1108/01445150710724658
- Barnard, C. (1938). *The functions of the executive*. Cambridge, MA: Harvard University Press.
- Barney, J. B. (1986). Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32(10), 1231-1241. Doi: 10.1287/mnsc.32.10.1231
- Barney, J. B. (1991). Firms resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. Doi: 10.1177/014920639101700108
- Barney, J., & Hesterly, W. (2006). Organizational economics: understanding the relationship between organizations and economic analysis. In S. R. Clegg, C. Hardy, & T. B. Lawrence. *The SAGE handbook of organization studies* (p. 111-148). London, UK: SAGE Publications Ltd.

- Barney, J. B., & Peteraf, M. A. (2003). Unraveling the resource-based tangle. *Managerial and Decision Economics*, 24(4), 309-323. Doi: 10.1002/mde.1126
- Bertero, C. O., Vasconcelos, F. C., & Binder, M. P. (2003). Estratégia empresarial: a produção científica brasileira entre 1991 e 2002. *Revista de Administração de Empresas*, 43(4), 48-62. Recuperado de <https://rae.fgv.br/rae/vol43-num4-2003/estrategia-empresarial-producao-cientifica-brasileira-entre-1991-2002>
- Bignetti, L. P., & Paiva, E. L. (2002). Ora (direis) ouvir estrelas: estudo das citações de autores de estratégia na produção acadêmica brasileira. *Revista de Administração Contemporânea*, 6(1), 105-125. Doi: 10.1590/s1415-65552002000100007
- Brockman, J. R. (1992). Just another management fad? The implications of TQM for library and information services. *ASLIB proceedings*, 44, (7-8), 283-288. Doi: 10.1108/eb051287
- Brønn, C. (1998). Applying epistemic logic and evidential theory to strategic arguments. *Strategic Management Journal*, 19(1), 81-95. Doi: 10.1002/(sici)1097-0266(199801)19:1<81::aid-smj935>3.0.co;2-k
- Camargos, M. A. D., & Dias, A. T. (2010). Estratégia, administração estratégica e estratégia corporativa: uma síntese teórica. *REGE Revista de Gestão*, 10(1), 27-39. Recuperado de <http://www.geocities.ws/occfi/estrategia.pdf>
- Chakravarthy, B. S., & Doz, Y. (1992). Strategy process research: Focusing on corporate self-renewal. *Strategic Management Journal*, 13(S1), 5-14. Doi: 10.1002/smj.v13:1+
- Chandler, A. D. (1962). *Strategy and structure: chapters in the history of the industrial enterprise*. Cambridge, MA: MIT Press.
- Christensen, H. K., & Montgomery, C. A. (1981). Corporate economic performance: diversification strategy versus market structure. *Strategic Management Journal*, 2(4), 327-343. Doi: 10.1002/smj.v2:4
- Corley, K. G., & Gioia, D. A. (2011). Building theory about building theory: what constitutes a theoretical contribution? *Academy of Management Review*, 36(1), 12-32. Doi: 10.5465/amr.2011.55662499
- Cyert, R. M., & March, J. G. (1963). *The behavioral theory of the firm*. Englewood Cliffs, NJ: Prentice Hall.
- Delery, J. E., & Roumpi, D. (2017). Strategic human resource management, human capital and competitive advantage: is the field going in circles? *Human Resource Management Journal*, 27(1), 1-21. Doi: 10.1111/hrmj.v27.1
- Duran, R. (2002). Competitive advantages exist: a critique of Powell. *Strategic Management Journal*, 23(9), 867-872. Doi: 10.1002/smj.253
- Elkington, J. (1997). *Cannibals with forks: the triple bottom line of 21st century business*. Oxford, UK: Capstone.
- Ghemawat, P. (2002). Competition and business strategy in historical perspective. *Business History Review*, 76(1), 37-74. Doi: 10.2307/4127751
- Gray, D. H. (1986). Uses and misuses of strategic planning. *Harvard Business Review*, January/February, 89-97. Recuperado de <https://hbr.org/1986/01/uses-and-misuses-of-strategic-planning>
- Hayashi, P. (2009). Múltiplas contingências e o processo de adaptação estratégica. *Revista Brasileira de Estratégia*, 2(1), 75-81. Recuperado de <https://periodicos.pucpr.br/index.php/REBRAE/article/download/13433/12851>
- Hayashi, P., Ito, N.C., & Gimenez, F.A.P. (2015). Reflexão e imbricação das atividades da firma com seus valores de uso e de troca. *Revista Pensamento Contemporâneo em Administração*, 9(1), 90-106. Doi: 10.12712/rpca.v9i1
- Hart, S. L. (2005). *Capitalism at the crossroads: the unlimited business opportunities in solving the world's most difficult problems*. Cranbury, NJ: Pearson Education.
- Hempel, C. G. (1942). The function of general laws in history. *The Journal of Philosophy*, 39(2), 35-48. Doi: 10.2307/2017635
- Hempel, C. G., & Oppenheim, P. (1948). Studies in the logic of explanation. *Philosophy of Science*, 15(2), 135-175. Doi: 10.1086/286983

- Hirsch, P. M., Friedman, R., & Koza, M. P. (1990). Collaboration or paradigm shift? Caveat emptor and the risk of romance with economic models for strategy and policy research. *Organization Science*, 1(1), 87-97. Doi: 10.1287/orsc.1.1.87
- Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (1997). *Strategic management cases: competitiveness and globalization*. St Paul, MN: West Publishing Company.
- Hoskisson, R. E., Hitt, M. A., Wan, W. P., & Yiu, D. (1999). Theory and research in strategic management: Swings of a pendulum. *Journal of Management*, 25(3), 417-456. Doi: 10.1016/s0149-2063(99)00008-2
- Hunt, S. D. (1983). General theories and the fundamental explananda of marketing. *Journal of Marketing*, 47(4), 9-17. Doi: 10.1177/002224298304700402
- Jarzabkowski, P. (2005). *Strategy as practice: an activity-based approach*. Inoviv, UK: Sage.
- Johnson, G., Scholes, K., & Whittington, R. (2008). *Exploring corporate strategy: text and cases*. New York, NY: Pearson Education.
- Johnson, G., Langley, A., Melin, L., & Whittington, R. (2007). *Strategy as practice: research and resources*. Cambridge, UK: Cambridge University Press.
- Kaplan, R. S., & Norton, D. P. (2004). *Strategy maps: converting intangible assets into tangible outcomes*. Boston, MA: Harvard University School Press.
- Keats, B., & O'Neill, H. (2001). Organizational structure: looking through a strategy lens. In M. A. Hitt, R. E. Freeman, & J. S. Harrison (Eds.), *Handbook of strategic management* (p. 520-542). Oxford, UK: Blackwell Publishers.
- Kerlinger, F. N. (1979). *Behavioral research: a conceptual approach*. New York, NY: Holt, Rinehart and Winston.
- Kivleniece, I., & Quelin, B. V. (2012). Creating and capturing value in public-private ties: A private actor's perspective. *Academy of Management Review*, 37(2), 272-299. Doi: 10.5465/amr.2011.0004
- Klemke, E. D. (1998). Introduction: what is philosophy of science? In E. D. Klemke, R. Hollinger, & D. W. Rudge (Eds.), *Introductory reading in the philosophy of science* (p. 19-28). Amherst, MA: Prometheus Books.
- Kuhn, T. S. (1962-1970). *The structure of scientific revolutions* (revised edition). Chicago, IL: Chicago University Press.
- Kuhn, T. S. (1998). The natural and the human sciences. In E. D. Klemke, R. Hollinger, & D. W. Rudge (Eds.), *Introductory reading in the philosophy of science* (p. 128-134). Amherst, MA: Prometheus Books.
- Learned, E. P., Christensen, C. R., Andrews, K. R., & Guth, W. D. (1965). *Business policy: text and case*. Homewood, IL: Richard D. Irwin.
- Lima, J. F. (2011). Clusters territoriais: elementos para reflexão. *Acta Scientiarum. Human and Social Sciences*, 33(2), 199-204. Doi: 10.4025/actascihumansoc.v33i2.11827
- Mahoney, J. T. (2005). *Economic foundations of strategy*. Thousand Oaks, CA: Sage.
- Mahoney, J. T., McGahan, A. M., & Pitelis, C. N. (2009). The interdependence of private and public interests. *Organization Science*, 20(6), 1034-1052. Doi: 10.1287/orsc.1090.0472
- Martin, S. L., Javalgi, R. G., & Cavusgil, E. (2017). Marketing capabilities, positional advantage, and performance of born global firms: contingent effect of ambidextrous innovation. *International Business Review*, 26(3), 527-543. Doi: 10.1016/j.ibusrev.2016.11.006
- McGahan, A. M., & Porter, M. E. (1997). How much does industry matter, really? *Strategic Management Journal*, 18(S1), 15-30. Doi: 10.1002/(sici)1097-0266(199707)18:1+<15::aid-smj916>3.3.co;2-t
- McKelvey, B. (2010). Complexity leadership: the secrets of Jack Welch's success. *International Journal of Complexity in Leadership and Management*, 1(1), 4-36. Doi: 10.1504/ijclm.2010.035788
- Mintzberg, H. (1987). Crafting strategy. *Harvard Business Review*, 65, 65-75. Recuperado de <https://hbr.org/1987/07/crafting-strategy>
- Mintzberg, H. (1990). Strategy formation school of thought. In J. W. Fredrickson (Ed.), *Perspectives on strategic management* (p. 105-237). Boston, MA: Ballinger.
- Mintzberg, H. (1994). *The rise and fall of strategic planning*. New York, NY: Free Press.
- Mintzberg, H. (2007). *Tracking strategies...toward a general theory*. Oxford, UK: Oxford University Press.

- Mintzberg, H., & Waters, J. A. (1985). Of strategies, deliberate, and emergent. *Strategic Management Journal*, 6(3), 257-272. Doi: 10.1002/smj.4250060306
- Mir, R., & Watson, A. (2000). Strategic management and the philosophy of science: The case for a constructivist methodology. *Strategic Management Journal*, 21(9), 941-953. Doi: 10.1002/1097-0266(200009)21:9<941::aid-smj141>3.0.co;2-d
- Mirowski, P. (1989). *More heat than light. Economics as social physics: physics as nature's economics*. Cambridge, MA: Cambridge University Press.
- Nag, R., Hambrick, D. C., & Chen, M. (2007). What is Strategic Management Really? Inductive derivation of a consensus definition of the field. *Strategic Management Journal*, 28(9), 935-955. Doi: 10.1002/smj.615
- Nerur, S., Rasheed, A., & Natarajan, V. (2008). The intellectual structure of the strategic management field: an author co-citation analysis. *Strategic Management Journal*, 29(3), 319-336. Doi: 10.1002/smj.659
- Newbert, S. L. (2007). Empirical research on the resource-based view of the firm: An assessment and suggestions for future research. *Strategic Management Journal*, 28(2), 121-146. Doi: 10.1002/smj.573
- Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: a meta-analysis. *Organization studies*, 24(3), 403-441. Doi: 10.1177/0170840603024003910
- Penrose, E. (1959). *The theory of growth of the firm*. New York, NY: Wiley.
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic Management Journal*, 14(3), 179-191. Doi: 10.1002/smj.4250140303
- Pettigrew, A. M. (1973). *The politics of organizational decision-making*. Abingdon, UK: Tavistock.
- Porter, M. E. (1979). How competitive forces shape strategy. *Harvard Business Review*, 57(2), 137-156. Recuperado de <https://hbr.org/1979/03/how-competitive-forces-shape-strategy>
- Porter, M. E. (1980). *Competitive strategy*. New York, NY: Free Press.
- Porter, M. E. (1981). The contributions of industrial organization to strategic management. *Academy of Management Review*, 6(4), 609-620. Doi: 10.5465/amr.1981.4285706
- Porter, M. E. (1985). *Competitive advantage*. New York NY: Free Press.
- Porter, M. E. (1990). *The competitive advantage of nations*. New York, NY: Free Press.
- Porter, M. E. (1996). What is strategy? *Harvard Business Review*, 74(6), 61-78. Recuperado de https://iqfystage.blob.core.windows.net/files/CUE8taE5QUKZf8ujfYIS_Reading+1.4.pdf
- Porter, M. E. (1998). Clusters and the new economics of competition. *Harvard Business Review*, 16, 77-90. Recuperado de https://edisciplinas.usp.br/pluginfile.php/3257594/mod_resource/content/1/clusters%201246493.pdf
- Porter, M. E., & Kramer, M. R. (2002). The competitive advantage of corporate philanthropy. *Harvard Business Review*, 80(12), 56-68. Recuperado de: <https://www.ncbi.nlm.nih.gov/pubmed/12510538>
- Powell, T. C. (2001). Competitive advantage: Logical and philosophical considerations. *Strategic Management Journal*, 22(9), 875-888. Doi: 10.1002/smj.173
- Powell, T. C. (2002). The philosophy of strategy. *Strategic Management Journal*, 23(9), 873-880. Doi: 10.1002/smj.254
- Powell, T. C. (2011). Neurostrategy. *Strategic Management Journal*, 32(13), 1484-1499. Doi: 10.1002/smj.969
- Powell, T. C., Lovallo, D., & Fox, C. R. (2011). Behavioral strategy. *Strategic Management Journal*, 32(13), 1369-1386. Doi: 10.1002/smj.968
- Priem, R. L., & Butler, J. E. (2001). Is the resource-based 'view' a useful perspective for strategic management research? *Academy of Management Review*, 26(1), 22-40. Doi: 10.5465/amr.2001.4011928
- Quinn, J. B. (1978). Strategic change: 'Logical incrementalism'. *Sloan Management Review*, 20(1), 7-19.
- Ramos-Rodríguez, A. R., & Ruíz-Navarro, J. (2004). Changes in the intellectual structure of strategic management research: a bibliometric study of the Strategic Management Journal, 1980-2000. *Strategic Management Journal*, 25(10), 981-1004. Doi: 10.1002/smj.397
- Rumelt, R. P. (1984). Towards a strategic theory of the firm. In R. B. Lamb (Ed.), *Competitive strategic management* (p. 556-570). Englewood Cliffs, NJ: Prentice Hall.

- Rumelt, R. P. (1991). How much does industry matter? *Strategic Management Journal*, 12(3), 167-185. Doi: 10.1002/smj.4250120302
- Shepherd, D. A., McMullen, J. S., Ocasio, W. (2017). Is that an opportunity? An attention model of top managers' opportunity beliefs for strategic action. *Strategic Management Journal*, 38(3), 626-644. Doi: 10.1002/smj.2499
- Simon, H. A. (1961). *Administrative behavior*. New York, NY: The Macmillan Company.
- Sutton, R. I., & Staw, B. M. (1995). What theory is not. *Administrative Science Quarterly*, 40(3), 371-384. Doi: 10.2307/2393788
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533. Doi: 10.1002/(sici)1097-0266(199708)18:7<509::aid-smj882>3.0.co;2-z
- Volberda, H. W. (2004). Crise em estratégia: fragmentação, integração ou síntese. *Revista de Administração de Empresas*, 44(4), 32-43. ISSN 2178-938X
- Weick, K. E. (1979). *The social psychology of organizing*. Reading, MA: Addison-Wesley.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180. Doi: 10.1002/smj.4250050207
- Whetten, D. A. (1989). What constitutes a theoretical contribution? *The Academy of Management Review*, 14(4), 490-495. Doi: 10.5465/amr.1989.4308371
- Whittington, R. (1993). *What is strategy: and does it matter?* London, UK: Routledge.
- Whittington, R. (1996). Strategy as practice. *Long Range Planning*, 29(5), 731-735. Doi: 10.1016/0024-6301(96)00068-4
- Wu, K. J., Tseng, M. L., Chiu, A. S. F., & Kim, M. K. (2017). Achieving competitive advantage through supply chain agility under uncertainty: A novel multi-criteria decision-making structure. *International Journal of Production Economics*, 190, 96-107. Doi: 10.1016/j.ijpe.2016.08.027