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Strategic management and the economics of the firm: How to reconcile the brother enemies?

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INTRODUCTION

Strategic management and the economics of the firm

How to reconcile the brother enemies?

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Abstract

Purpose – The purpose of this paper is to argue for the need to reconcile managerial and economic approaches of the firm. Strategic management seems to be the perfect playground for this.

Design/methodology/approach – The paper shows many divergences between the economic and managerial approach of the firm but also highlights many topics where both approaches come in handy.

Findings – The authors underline the topics and theories in strategic management with the greatest benefits of mixing economics and management can be expected and they echo the papers in this special issue.

Practical implications – The paper comes as a warning for those using only managerial perspective without listening to the caveats and ideas put forward by the economic approach of the firm.

Originality/value – The paper offers an agenda of how economics and management could be reunited, and shows the relevance of doing so to both theory and practice.

Keywords Strategic management, Economics, Strategy, Management, Theory of the firm

Paper type Conceptual paper

Since Rumelt *et al.*'s (1996) seminal book on *Fundamental Issues in Strategy: A Research Agenda for the 1990s*, scholars' attempts to link the economic study of the firm and firm strategy have been numerous and recurrent. However, most of the questions raised in their book remain burning issues and continue to prompt enlightening research and passionate debates. Indeed, the research focus of scholars in economics and applied management remains: firms, consumers and institutions interacting with one another through market and non-market relations. But those objects of research have evolved. With the appearance of firms organized in networks (in a broad sense), around communities, serving globalized markets under everyday stakeholders' control, the development of the social responsibility of the firm, the behaviours of many actors, organizations and institutions face new challenges.

At the same time, industrial economics, evolutionary economics, financial economics, behavioural economics, economic geography, entrepreneurial economics, institutional economics and others have evolved in their respective analytical



frameworks and explanatory power, all of them providing renewed, stimulating contributions to the understanding of organizations and their strategic management.

Economics of the firm and strategic management: a difference of method?

In their seminal work Milgrom and Roberts (1988) explained the needs and aims of research on the theory of the firm. Based on Coase (1937), they pinpointed a long forgotten issue, “that any firm could utilize only a fixed amount of management or entrepreneurial talent, so that taking best advantage of the talent of society’s entrepreneurs and managers requires an economy with many firms. This assumption obviously begs the question of the nature of the firm, but little that is more satisfactory has been proposed until recently” (p. 446). They also highlight that the market has been considered, since a long time, to be not a single form of organization but a whole category. Moreover they show that any clear-cut distinction between markets and other organizations quickly blurs.

Clearly the first efforts on the theory of the firm focused on the opposition between firms, market and other organizational forms. Soon methodology problems appeared, as explained by Milgrom and Roberts (1988, p. 450):

We would be the last to denigrate the value of specialization among researchers; it is quite likely that efficiency requires that economists first focus primarily on theoretical analyses of organizations. Moreover, it is certainly true that research done in other disciplines, having been aimed at answering questions other than those that occur naturally to economist and, even more, having been informed by very different modes of theorizing that we employ, are not always directly relevant to our work. Still, the best works in these fields can be enormously valuable to economist and it seems abundantly clear that the economics or organization could be enriched by insights and observations imported from these other fields, as well as, of course by empirical studies in economists [...] Finally the shape of the future theory will and should be influenced by the importance applied issues of the day. Just as the growth of the modern firm led Knight and Coase to begin theorizing about germs, and the Russian revolution led to new theories of socialist central planning and analyses of the market as a planning mechanism, such modern phenomena as corporate takeovers and restructuring, the increasing use of subcontractors in manufacturing industries, and the move of various financial and strategy formulation functions out of the firm to be provided by investment bankers and consulting firms, ought to attract the attention of economic theorist.

All these show that, in the early stage of their development, theory of the firm and management relied on different methods, points of view and applications. This point is also clearly made by Geroski (1997) who, when asking the question “Is there a difference between economics applied to particular business problems and strategy?”, identified mainly two basic differences, both linked to the methods and field of application of each discipline.

First, he argued that strategy is a very practical subject, while economics is often not. As long as economists continue to care about building very general and very logically rigorous models which they hope to test using sophisticated statistical techniques, strategy will always sit somewhere near the very applied end of economics. It will therefore often be the source of topical and practical important questions even if it is not often able to provide absolutely persuasive answers.

Second and more fundamentally, someone interested in strategy is typically interested in a particular firm, or a particular group of firms (e.g. General Motors, Microsoft, Ubi Soft, etc.). For an economist, this does not matter so much. Economists are typically interested in the nature of a particular market outcome, and not the names

of the firms which feature in that equilibrium. Indeed, at least partly for these reasons, researchers typically work with symmetric models in which all firms are the same, and only the number of them participating in the market matters. An economist will be interested in observing that entry occurs in a particular market; a strategy person will want to know why it was Honda and not Nissan that entered. The field of enquiry is very similar, but some of the questions and the reasons why they are asked are different.

If the methodologies used in economics and management are not the same, one would be badly inspired to trade one methodology for the other discipline. Nevertheless, this difference in methodologies could be a strength to those who try to bundle together the different approaches. Indeed, the combination of management and economic theories is essential for the continuous development of theory and practice around firms and markets. The economic point of view underlines the firm market opportunities whereas the management point of view develops the competences, research-based approach. Obviously a practical theory of the firm needs a combination of both environment and internal organization modelling.

This point of view is clearly advocated by Spulber (2003) for whom economic and management perspectives can and should be integrated. Some time ago Coase (1937) suggested that we should analyse firms as they exist in the real world. This idea is pursued by Dietrich and Krafft (2011) when they suggest that real firms are obviously both institutional and technical objects. The institutional analysis covers matters such as boundaries, organization and the like. Technical analysis of the firm recognizes that firms are production units operating in a market setting. A fruitful research agenda is therefore to overcome the divide between technical and institutional analysis, as suggested by Spulber.

Furthermore, the field of strategic management may be the perfect framework to undertake the integration of economics and management methodologies. It is close to both fields and both have only small efforts to formulate to come together. There exist many strategic management outlets with more economic/quantitative perspective and several strategic management journals with a more managerial/qualitative aim. Spulber (2003, p. 254) advocates that the original divide between management and economics is due to economists focusing on market clearing (neoclassical economics), strategic interaction (industrial organization) and incentives (transaction-cost economics), whereas the managers investigate important management questions and practical business problems. The strategic management field requires both the formulation of competitive strategy and the implementation of that strategy by the organization. In the words of Teece (1984, p. 87): "the basic idea behind strategic management is that a firm needs to match its capabilities to its ever-changing environment if it is to attain its best performance". It is usual that strategic management starts with an internal and external analysis. External analysis to see the threats and opportunities based on, e.g. Porter's five forces model. Internal analysis based on organization theory, resources and competences listing. Obviously all those elements can be tied together.

Similarly, in a historical perspective Chandler (1990) analysed the growth of modern firms and industries. He stretched the importance of economies of scale and scope for the production and commercialization of goods. But Chandler was eager to link the economics of scale and scope to managerial action. Such economies can only be achieved if there is a clear strategy and a supportive organizational structure (encouraging team work of competent individuals). Chandler called the ability of the

firm to obtain economies of scale and scope “organizational capabilities”, a mixture of strategic and functional capabilities. A concept, not far away from the notion of “dynamic capabilities” introduced by Teece (2009) who defined them as “the ability to sense and then to seize new opportunities, and to reconfigure and protect knowledge assets, competencies, and complementary assets and technologies to achieve sustainable competitive advantage”. It is interesting to note that Teece and his co-authors are thus bringing back an important perspective of the theory of the firm, namely the dynamic perspective. Yet, the dynamic perspective necessitates both an economic and strategic management point of view to be studied correctly (Rathe and Witt, 2001) because it needs to integrate equilibrium, disequilibrium, resources and incitations.

In short, there is a lot to gain for each field – strategic managements and economics of the firm to adopt some elements of methods used in the other. For instance, Dosi and Marengo (2007) argue that the management field offers probably more variety in terms of methodology and points of view expressed (e.g. psychology, anthropology, sociology, language analysis, quantitative or qualitative analysis of business history and so on) than the economics of the firm, even if some approaches are much more used and recognized than others. It may hence pay for economists of the firm to look at this variety of approaches and to adopt some of them.

Symmetrically, it is likely to pay for scholars involved in strategic management to rely more regularly on economic tools (Besanko *et al.*, 2009). Many economic concepts can be useful to strategic management: for instance, demand and supply, price determination, elasticity, economies of scale and scope, principal agent analysis, transaction costs analysis, opportunity cost, marginal analysis, contract theory, game theory, etc. All these concepts can very easily find attention and application in strategic management. Those approaches added to the already used concepts in management research would increase the analytical, mathematical, computational and statistical power of the analysis. Already, some authors are creative and courageous enough to include the findings coming from most economic theories to invigorate the strategic management point of view. Such an approach is taken by Durand (2001) who uses several economic theories of the firm to provide a theoretical anchorage to the firm’s selection process claimed in many management models (the latter often lacking a solid theory-based explanation).

To summarize, that researchers in the field of economics and management sometimes fail to communicate is a long-lasting phenomenon. In this section we have highlighted some of the most important differences between the two disciplines. However, we also believe that most differences of methods between economics and management are largely attributable to the domination of the neoclassical view of the firm in economics. It is true that this approach is powerful and allows comparisons between firms and market structure on the same basis. However, it has also important drawbacks. Among others, we consider that the neoclassical theory of the firm is inappropriate for strategic management which will lead us to highlighting avenues adopted in recent years in economics of the firm to overcome those limits and reconcile both literatures.

The limits of the neoclassical theory in strategic management

For Teece and Winter (1984) the drawbacks of using economics in strategic management can indeed be found early on in the training of the researcher, namely in the limits of the neoclassical theory taught in management education. They underline

in particular the early clumsiness of economics in tackling strategic management problems. The following are some examples of subjects which has not received enough attention from economists, in particular because they are inappropriate for neoclassical analysis.

Treatment of know-how

Teece and Winter underlined that the most common theoretical approach in economics consists in taking technology as given, ignoring that technology evolved, and that managers may play a role in this evolution, by investing in innovation, R&D or by developing creative idea management processes for instance. All the knowledge required is assumed to be found in blueprints and is easily acquired, used and understood by all members of the firm. This does not sound realistic and does not echo the managerial approach of technology and firms, where knowledge is partly tacit, difficult to acquire, to train and to diffuse (thus requiring managers to generate added value).

Static vs dynamic analysis

Almost by definition there is not “static” situation in strategic management, everything is about dynamics. A major part of economic analysis is focused on equilibrium analysis, steady state computation and comparative analysis. In other words, many of the basic economic tools are static. The problem is that most accurate economic models incorporating dynamics become quickly complex (not analytically solvable) and impractical from a managerial point of view.

Managers, entrepreneurs and firms

In the neoclassical theory of the firm, the firm is reduced to a production function. The firm has no density. Leading actors such as managers or entrepreneurs are synonymous when recognized. On the other hand managerial literature emphasizes the difference between those actors and the necessity to conceive firms differently depending on the respective managerial or entrepreneurial influence (Stevenson and Jarillo, 1990). Because the firm is reduced to a production function, important questions such as the organization of the firm or the boundaries of the firm are secondary in neoclassical economics or simply ignored. The same holds for entrepreneurs: by definition entrepreneurs are not consistent with the neoclassical theory of the firm (Casson *et al.*, 2008). Entrepreneurs are agents going against the existing equilibrium because they have superior information or knowledge on a given situation. They are difficult agents to model in a neoclassical framework. Yet, as claimed by Teece (1984, p. 91), “The need for a theory of entrepreneurship, or at least a theory which does not suppress the process of entrepreneurship, is of considerable importance to strategic management”.

Alternative economic approaches to overcome those limits

Those limits of the neoclassical framework have been partly overcome with the emergence of alternative economic approaches, which are also more in line with the methodology used in strategic management.

Treatment of know-how

The treatment of know-how has largely been taken over by economists. In a micro-based approach of economic growth the notion of endogenous growth based on innovation and

evolving technology has been studied since quite some time now. In particular within the field of evolutionary economics, a theory that has grown fast since 1984 and Teece and Winter criticism. Know-how, tacit knowledge and communities have been and are still studied extensively by economists and strategic management researchers, for example in the dynamic capabilities framework.

The dynamic capabilities approach, as already mentioned, is nowadays at the heart of many strategic management papers. The study of Arto Kuuluvainen, in this issue, aims at tackling this criticism by first introducing a theoretical framework for shaping dynamic capabilities and then by testing this framework empirically. The study uses qualitative case study methods and the empirical part of the research introduces a single case study of a Finnish manufacturing SME. The longitudinal research data include two structured telephone interviews and two personal interviews of firm managers. A significant amount of secondary data are also analysed in the study. Pre-planned systematic coding methods are utilized during the data-analysis phase of the study. It allows Kuuluvainen to provide concrete examples of dynamic capabilities based notably on the existence of know-how and creation of new relational and practical knowledge.

For Rugraff, in this issue, strategy scholars have identified several sources of performance and competitive advantage: first, the industry structure view explains the good performance of firms by favourable structural characteristics; second, the resource-based view, the firm is considered as a unique bundle of resources and know-how leading to a superior performance. His work refers to a third approach, the relational view of the firm. The relational view considers that collaboration between firms/organizations may be at the origin of an interorganizational rent-generating process that results in a sustained competitive advantage. The author tests this approach on a sample of automobile manufacturer relationships and shows interesting results on the voice or exit strategies, particularly in the Skoda Company.

Static vs dynamic analysis

Helfat and Winter (2011) in their work explain why the line between dynamic and operational (or ordinary) capabilities is unavoidably blurry, draw implications for capabilities that promote economically important but seemingly gradual change, and provide recommendations for future research that takes these issues into account. Jacobides *et al.* (2012) use formal modelling (both the analytical, closed-form variety and computations) to advance our theoretical understanding of some key strategic issues. Especially they elucidate the nature of the “semi-permanent attachment” of resources, moving beyond the role of resources as “under-paid and under-appreciated assets” owned by a firm. They also show how heterogeneous firms can co-exist in a competitive equilibrium, and establish that the degree of heterogeneity is directly linked to the firms’ growth calculus. Similarly the neo-Austrian approach of the firm (e.g. Langlois, 2003; Langlois and Roberston, 1995) suggests that we should incorporate dynamic as well as static transaction costs. Static costs are traditional comparative static costs of organizational functioning. Dynamic transaction costs are incurred with the management of strategic reorientation and involve investment in managerial and complementary assets. These long-run transaction costs would not exist in a world in which long run, firm specific, profit opportunities did not exist.

In a similar spirit Giannoccolo and Biondi explore the complementarities and competition between firms in the presence of intangible resources. From a strategic point of view the question is raised in a burgeoning literature as is the work of

Jacobides *et al.* By using a traditional economic modelling methodology the authors show the implication of complementarities between competitive firms.

Managers, entrepreneurs and firms

Since the criticism of Teece and Winter alternative theories arose especially in the field of entrepreneurship. For Foss and Klein (2012) the theory of entrepreneurship and the theory of the firm should be treated together. They argue that the important connections between these two bodies of literature have been largely overlooked. "A good theory of entrepreneurship should explain the conditions under which entrepreneurship takes place, the manner in which entrepreneurship is manifested, and the interaction between entrepreneurial activity and firm, industry, and environmental characteristics". They highlight that managerial, firm and entrepreneurial theories should be tied together more intimately, to provide different but complementary views on risk, uncertainty or knowledge creation.

The development of the technological landscape and its integration into organization raise many managerial challenges. In their paper, Shimanuki Seiya and Saiki Tomoko link technology diversity to risk in the context of the medical device industry in Japan. A comparison of two of the largest firms in the medical device sector indicates that high-risk shrinks technological diversity. Conversely, low-risk makes it possible to employ more diverse technologies. This difference suggests the hypothesis that successful innovation in high-risk products and successful innovation in low-risk products require different management styles, an inference for which a questionnaire survey administrated to a broader sample of firms provides supporting evidence.

In their work Blackburn and Kovalainen (2009) highlight the fact that methodology is important when it comes to research on the topics of firms, entrepreneurship and management. They quote Edmondson and McManus (2007, p. 1155) on methodological fit (i.e. the internal consistency among elements of a research project) to underline the importance of field studies and the openness toward new methodologies. Research on strategy and on theories of the firm must have the same methodologies; if the methodologies are too different, the research will not lead to new knowledge or science development. One of the key questions that emerges is naturally "how to combine and integrate different methods" (Blackburn and Kovalainen, 2009, p. 133). This question raises a much broader problem that can be found at all intersections between the management and the economic literature. According to Edmonson and McManus the benefit of "hybrid" methods is not recognized by the disciplinary scientific community for the moment and thereby limits accumulated knowledge.

The paper by Koeberle in this issue contributes to this methodological issue. In line with recent works on strategy as practice, he uses discourse analysis to understand how and why some strategic decisions are finally taken. The paper is also notable as it explores strategy in non-firm organizations: more precisely the author looks at the governance of villages confronted with the modification of their urban plan. Far from being obvious, the decision to change the urban characteristics is important and influences the stakeholders. Formulating a strategy in such a context necessitates to cope with various constraints (some of them being very different from the ones identified in the firm, others being more similar).

Other alternatives

In this context, many other alternatives could be mentioned. To contribute to the debate on where to go with economics in strategy literature this special issue is precisely

targeted at presenting modern ideas which borrow from economic principles and other disciplines in order to advance the understanding of the problems faced by the strategic management field. Future research that proposes a dialogue between strategy and economics could also explore the following topics:

- *Boundaries of the firm*: what should the firm do? How should the firm do it? Contributions could be on the link between size, location and activity, could analyse open innovation practices which considerably redefine boundaries and incentive mechanisms, could investigate the development of spin-off and entrepreneurship as a consequence of the outsourcing strategy of big conglomerates, etc.
- *Competitive advantage and survival*: what should be the basis of the firm competitive advantage, and how should it adjust over time? Contributions could deal with the ways firms try and develop their agility, how they build dynamical capabilities to remain competitive through time, how they implement ambidextrous management, how they survive and develop on turbulent markets (emerging and/or collapsing ones), etc.
- *Internal organization*: how should the firm delineate its structure and organize its systems internally? What kind of governance should be implemented in the twenty-first century? Possible proposals could be on the impact of IT on the internal structure of organizations and on power and motivation within firms, on the new agency problems faced by new (sometimes ad hoc and virtual) organizational forms, etc. Proposals could also investigate the ethics of firms and managers by using behavioural economic reasoning for instance.

Overall, research on the economic theory of the firm is not yet a dying discipline and the interrelations with strategy are numerous. It has a prosperous future, but the type of future that will come out largely depends on the capacity of researchers with different backgrounds (economists and managers) to learn from each other, develop a common research agenda and finally get involved in an effective co-construction of knowledge (Van de Ven and Johnson, 2006).

References

- Besanko, D., Dranove, D., Schaefer, S. and Shanley, M. (2009), *Economics of Strategy*, 5th International Student Edition, John Wiley & Sons Ltd, New York, NY.
- Blackburn, R. and Kovalainen, A. (2009), "Researching small firms and entrepreneurship: past, present and future", *International Journal of Management Reviews*, Vol. 11 No. 2, pp. 127-48.
- Casson, M., Yeung, B., Basu, A. and Wadeson, N. (2008), *The Oxford Handbook of Entrepreneurship*, Oxford University Press, Oxford.
- Chandler, A.D. (1990), *Scale and Scope: The Dynamics of Industrial Capitalism*, Harvard University Press, Cambridge.
- Coase, R. (1937), "The nature of the firm", *Economica*, Vol. 4 No. 4, pp. 386-405.
- Dietrich, M. and Krafft, J. (2011), "Firm development as an integrated process: with evidence from the general motors – fisher body case", *Journal of Evolutionary Economics*, Vol. 21 No. 4, pp. 665-86.
- Dosi, G. and Marengo, L. (2007), "On the evolutionary and behavioral theories of organizations: a tentative roadmap", *Organization Science*, Vol. 18 No. 3, pp. 491-502.
- Durand, R. (2001), "Firm selection: an integrative perspective", *Organization Studies*, Vol. 22 No. 3, pp. 393-417.

- Edmondson, A.C. and McManus, S.E. (2007), "Methodological fit in management field research", *Academy of Management Review*, Vol. 32 No. 4, pp. 1155-79.
- Foss, N.J. and Klein, P.G. (2012), *Organizing Entrepreneurial Judgment: A New Approach to the Firm*, 1st ed., Cambridge University Press, Cambridge.
- Geroski, P.A. (1997), "What can economics offer strategy?", *International Journal of the Economics of Business*, Vol. 4 No. 2, pp. 215-28.
- Helfat, C.E. and Winter, S.G. (2011), "Untangling dynamic and operational capabilities: strategy for the (n) ever-changing world", *Strategic Management Journal*, Vol. 32 No. 11, pp. 1243-50.
- Jacobides, M.G., Winter, S.G. and Kassberger, S.M. (2012), "The dynamics of wealth, profit, and sustainable advantage", *Strategic Management Journal*, forthcoming.
- Langlois, R. (2003), "The vanishing hand: the changing dynamics of industrial capitalism", *Industrial and Corporate Change*, Vol. 12 No. 12, pp. 351-85.
- Langlois, R. and Roberston, P. (1995), *Firms, Markets and Economic Change: A Dynamic Theory of Business Institutions*, Routledge, London.
- Milgrom, P. and Roberts, J. (1988), "Economic theories of the firm: past, present, and future", *Canadian Journal of Economics*, Vol. 21 No. 3, pp. 444-58.
- Rathe, K. and Witt, U. (2001), "The nature of the firm – static versus developmental interpretations", *Journal of Management and Governance*, Vol. 5 Nos 3-4, pp. 331-51.
- Rumelt, R.P., Teece, D.J. and Schendel, D.E. (Eds) (1996), *Fundamental Issues in Strategy*, Harvard Business School Press, Harvard.
- Spulber, D.F. (2003), "The intermediation theory of the firm: integrating economic and management approaches to strategy", *Managerial & Decision Economics*, Vol. 24 No. 4, pp. 253-66.
- Stevenson, H.H. and Jarillo, J.C. (1990), "A paradigm of entrepreneurship: entrepreneurial management", *Strategic Management Journal*, Vol. 11 No. 4, pp. 17-27.
- Teece, D.J. (1984), "Economic analysis and strategic management", *California Management Review*, Vol. 26 No. 3, pp. 87-110.
- Teece, D.J. (2009), *Dynamic Capabilities and Strategic Management: Organizing for Innovation and Growth*, Oxford University Press, Oxford.
- Teece, D.J. and Winter, S.G. (1984), "The limits of neoclassical theory in management education", *American Economic Review*, Vol. 74 No. 2, pp. 116-8.
- Van de Ven, A.H. and Johnson, P.E. (2006), "Knowledge for theory and practice", *Academy of Management Review*, Vol. 31, pp. 802-21.

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