

The Resource Value Chain: A Planning Framework for Developing an Optimal Configuration of the Firm

Angelina Zubac and Professor Graham Hubbard,

Adelaide Graduate School of Business

az@strategylink.com.au

graham.hubbard@adelaide.edu.au

ABSTRACT

Drawing on resource-based theory (RBT), this paper develops a resource value chain framework. In common with activity-based value chains, it too is a method for representing and analyzing the firm, and identifying what may be its optimal configuration. However, as opposed to an activity-based value chain, it is specifically designed to help managers concentrate on understanding the interrelationships between the firm's various assets and capabilities. Thus, it can be used to analyze to what extent a firm's successes can be attributed to a certain set of resources and whether there is scope to further develop them to advance the firm's strategies. These ideas are illustrated by analyzing a Basel II operational risk project at a large Australian retail bank.

Keywords: resource-based theory, strategy process, capabilities, competencies, business processes, value chain

INTRODUCTION

Even though Porter's (1985) generic value chain is one of the most widely used methods for representing a firm's operations and understanding its business processes, this does not necessarily mean it can solve the configuration problems of every type of firm (Stabell & Fjeldstad, 1998). The same applies to firms' resource configuration problems. Although the generic value chain can provide some guidance as to what might constitute a firm's optimal resource¹ configuration (Porter, 1991), it was not designed to help analyze or represent how different combinations of resources might give it an advantage in the marketplace (Hoskisson et al. 1999; Spanos & Lioukos, 2001). This is because it is grounded on the premise that a firm's resources are always subordinate to the activities that the firm undertakes. The shape a firm's value chain and any resources it may develop or acquire over time are dependent on industry structure, the functional activities the firm focuses on, the value chain of its customers, suppliers and competitors, and whether the firm adopts a cost or differentiation focus (Porter, 1991). It is not driven by the firm's initial resource bundle or how it subsequently develops its resources to compete in the marketplace, which is the position taken in RBT (Wernefelt, 1984; Barney, 1991).

A number of studies have also found that a firm's annual and capital budgeting decisions are almost invariably based on whether the firm's different strategic objectives can be met (Bower, 1972; Burgelman, 1983; Christensen & Bower, 1996). The resource investment patterns to emerge will be determined by top management's perception of what parts of the firm's strategy have been effectively executed and the incentives paid to management. It will also be determined by the capacity of the firm's managers (Castanias & Helfat, 2001; Pierce, et al., 2002), luck or accidentally combining useful combinations of resources (Barney, 1986), the realization that some cross-subsidization of the firm's resource investments may sometimes be inevitable, the path dependencies associated with the firm's past resource investment decisions (Teece, et al., 1997) and how difficult it might prove to access or develop some resources (Maritan, 2001). Ultimately, it is the firm's managers' collective view of what

¹ The term 'resources' is defined as the include the unique combination of assets and capabilities that a firm possesses, and which can be used by the firm to implement its strategies and improve its overall performance.

the firm can achieve through its resources that will determine the patterns of investment to emerge at a firm. This indicates that rather than think of the firm as being made up of useful activities or batches of generic business processes, as in the generic value chain, managers often find it more useful to think of the firm as being made up of many closely interrelated and potentially productive resource investments. These will normally be categorized to reflect the firm's strategic objectives, with the notion of a resource investment necessarily incorporating the notion of a business process. This is because a resource investment and a business process are not the same thing, although this would be convenient if you were going to use a business process and its effectiveness as the dependent variable in a study (Ray, et al., 2004) or, by implication, in an internal review of the firm's performance. A resource investment can be made up of many assets and capabilities, or more than one business process. Generally speaking, many managers with different duties and cost centres could be responsible for bringing a single business process into being and sharing its costs.

Purpose of this Paper

In this paper, we develop a resource value chain framework that is built on the assumption that if a firm is to grow at all in size, scope, level of productivity or scale, its manager must continuously consider which of its resources it will need to reinvest in or divest, and which new resources it will need to acquire to maximize the firm's chances of meeting its performance objectives and minimize the risk of it failing in any way. In the first section of this paper, we provide a typology of resources that is derived from the resource-based theory (RBT) literature. We explain why this typology of resources provides insight into how the firm's performance prospects are positively affected by different resources at different times in its life. In the section that follows, we then develop a resource-based framework for analyzing the firm that is based on this resource typology, and briefly describe Porter's (1985) value chain framework, and Stabell and Fjeldstad's (1998) value shop and value network frameworks. This provides the context for explaining how it is possible to use our resource value chain in conjunction with either of these three activity-based value chains to identify an optimal configuration for the firm. In the fourth section, we illustrate our ideas by discussing a Basel II² operational risk project at an Australian retail bank. We explain how this project shows that managers are already thinking about what might constitute a firm's resource value chain. It also shows that although the managers working on the Basel II project had considered the activities that needed to be undertaken to achieve the project's objectives, it would have been difficult for them to understand the competencies that needed to be formed to achieve the bank's objectives if they had just concentrated on configuring critical activities or business processes. We conclude by discussing the benefits of using a resource value chain.

SECTION ONE: A TYPOLOGY OF RESOURCES

Different kinds of capabilities. Capabilities have generally been defined as the firm's 'ability to integrate, build and reconfigure internal competences' to enable it to perform a distinct activity or set of activities, and as the means by which a firm's asset-based resources can be deployed or manipulated

² Basel II is a capital adequacy regime or framework that the Bank for International Settlements expects member banks to implement if they are to be accredited as able to manage risk and determine the amount of capital that must put aside to

by its managers (Amit & Schoemaker, 1993: 34). In the RBT literature, there are also two general categories of a capability: (1) capabilities that are dynamic in quality, and (2) those assist with the firm's day-to-day operations (Winter, 2003). In RBT, a firm's dynamic capabilities are generally associated with the firm being able to successfully respond to the marketplace, especially in situations where the market in question is constantly changing, for instance, it is subject to significant year-to-year variations in market revenue and/or a high rate of newly introduced technologies or products and services (Teece, et. al. 1997). They include easily identifiable processes, such as the firm's product development, strategic decision making and alliancing processes (Eisenhardt & Martin, 2000). Core dynamic capabilities or core competencies allow the firm to change how it operates so that it is able to cope with market-based change and sustain a competitive advantage.

A hierarchy of capabilities and assets. It is for this reason that a firm's dynamic capabilities are considered to be more important to the firm than its operationally focused capabilities: They *operate to extend, modify or create ordinary capabilities, those capabilities that permit a firm to 'make a living' in the short term* (Winter, 2003: 991); they make it possible for the firm to go about its business of producing, delivering and promoting its products and services to its customers. A firm's core competencies, which are a more mature and pervasive type of dynamic capability are even higher up in the hierarchy of capabilities. This is because of their ability to help firms sustain a competitive advantage and take a lead in industry. Core competencies are used to deploy the firm assets, its operational and its dynamic capabilities (Lei, et. al. 1996). In other words, they enable the firm to manipulate, combine and re-combine its dynamic capabilities to respond to major changes in the firm's markets. They can also be thought of as the 'the collective learning of the firm, especially how to coordinate diverse production skills and integrate multiple streams of technology' (Prahalad & Hamel, 1990). They are a type of capability that not all firms in the same market will possess. Just as a firm's capabilities are hierarchical, a firm's asset-based resources also operate in a hierarchical manner. A firm's assets may be either a commodity-based asset or a complex asset. Commodity assets

cover its operational and credit risks. Banks are monitored and accredited as complying with Basel II by their national banking regulator. See www.bis.org for more information.

are ‘roughly standardized’ and could be traded in ‘identifiable markets’, whereas complex assets are much less easily traded and are ‘typically created by bringing together commodity resources and, in effect, sinking some costs that have the effect of modifying them or connecting them to each other in ways that are at least semi-irreversible’ (Denrell, et al., 2003). A firm’s assets may have the capacity to contribute to a firm’s strategies, and not just by being acquired or picked at the right time and place (Makadok, 2001) but by being developed to advance the firm’s strategies. In this way, the firm’s asset-based resources also make it possible for a firm to respond to the marketplace and engage in strategic activities.

Resource Configurations. Thus, long-term competitive advantage should be associated with the nature of a firm’s resource configurations, not the firm’s dynamic capabilities. This is consistent with research that shows that in extremely fast-moving environments the condition that a firm’s resources must be rare, valuable, inimitable and non-substitutable (Barney, 1991) will often break down (Eisenhardt & Martin, 2000). It may be more useful for managers to think about the advantages of investing in novel combinations of resources, as in the long-term competitors can imitate most things or improve upon them (Galunic & Rodan, 1998). This confirms that the term ‘resources’ should be used generically to describe all of the assets and capabilities that the firm has at its disposal to develop and deploy with the objective of producing and delivering potentially profitable products and services to its customers. The firm’s *assets* should be defined as the tangible and intangible financial, physical, human, technological and organizational inputs that a firm uses to develop, produce, modify, improve and deliver its products and services to its customers, and something that must be paid for first to be able to use. A firm’s *capabilities* can be either *operational* or *dynamic* in focus. They will also have a distinct life-cycle (Helfat & Peteraf, 2003).

SECTION TWO: A RESOURCE-BASED VALUE CHAIN FRAMEWORK

The ability of some resources to significantly contribute to a firm’s strategy will vary over the firm’s life. By the same token, a firm’s managers will divest the firm of those resources that are

perceived by them as being no longer able to contribute to the firm's strategic efforts, even if they are wrong about those resources. It is for this reason that we believe that a firm can be described as being made up of *many closely interrelated and potentially productive resource investments*, with a *resource investment* being defined as the discrete number of resources that the firm's managers have chosen to develop or deploy to (1) produce and deliver a number of potentially profitable products and services to the marketplace, and/or (2) grow or contract the firm to be an increasingly market sensitive and efficient entity. This conceptualization reminds us of the fact that firms engage in formal capital budgeting exercises. As **Figure 1** shows, these ideas are the basis on which a resource value chain can be developed.

INSERT FIGURE 1 HERE

This framework can help managers understand how firms invest in and develop the resources at their disposal, and how a firm's resources are normally accumulated and developed over time, enabling the firm to grow and compete in the marketplace. The resource value chain implies that a firm's more important activities and its many resources are jointly responsible for determining the firm's fortunes. As a result, an individual resource investment will need to be linked to a particular operational or strategic objective. It could also be configured to reflect the firm's primary or secondary strategic activities, as described in Porter's (1985) generic value chain framework. However, it could just as easily be configured to reflect the resource investment and budgeting structures that have developed at the firm.

From the point of inception, a firm's resource investments will have the capacity to explain the business that the firm is in or why it may have diversified into its core businesses. This means that not only can one represent and analyze the firm's core business, the firm's non-core business objectives can be represented with a high level of granularity. Thus, a resource investment could also be a one-off, strategic project, for instance, a performance management programme, a software integration project, a new alliance, or a business unit that is established at the firm for a short period of time to

identify suitable acquisition targets. By combining and recombining the firm's various resources and capabilities, and ensuring they are matched to the specific strategic objectives of a firm at the points in time that this is most critical, a firm's managers can change its focus and ensure that the firm takes advantage of the value and the potential inherent in the resources at its disposal. As **Figure 2** shows, one can identify which major resource investments and strategic initiatives should be core business and which ones should not be classed as such. Most importantly, it shows that the firm's managers may sometimes believe it is in the best interests of the firm to develop some of the firm's resources in isolation.

INSERT FIGURE 2 HERE

Firm over time. Since the firm will acquire different asset-based resources to meet the specific demands placed on it by the market and will develop a supporting set of capabilities, it can be inferred that this will be for either of the following four reasons: (1) to help the firm function to produce and deliver products and services to the firm's customers, (2) to grow the firm by developing new products and services, entering new markets or by improving its processes, (3) to establish mutually enriching customer, supplier or business networks or alliances, or (4) to allow the firm to identify and manage major acquisitions, such as purchase another firm. As the firm's circumstances change or as the firm's markets contract, it is likely that the firm will modify its strategies, including re-evaluate its current diversification strategy. It will also divest itself of certain assets or even accumulate more assets. It will build capabilities around the assets that are available. If it is possible and the firm's history allows it, the firm will attempt to develop core competencies.

As a result, a resource value chain should be able to represent the different phases of the firm's life, including the way in which different resources will need to be introduced to the firm to ensure that it can continue to perform in the marketplace or even get to a point where it can sustain any competitive advantage that it may have. This can be illustrated by showing how a firm's aggregated resource investments can be represented in six different ways to represent six distinct phases of the firm's life,

as shown in **Figures 3, 4 and 5**. Since capabilities deploy assets, it is highly likely that the firm's managers will acquire and develop assets on behalf of the firm that reflect the phase the firm is in presently. It follows that a firm's assets could be categorized as being either functional, architectural, network or acquisition directed: Functional assets allow the firm to organize itself, architectural assets allow the firm to grow itself, network assets allow the firm to work with external parties, and the assets that can be applied to acquisitions allow the firm to pursue opportunities to acquire major assets or even another firm.

INSERT FIGURES 3, 4 & 5 HERE

Phase one involves those resources that a firm or a business unit will possess when starting up or entering a growth stage. At such junctures, the firm should still be trying to understand how to distinguish its products and services from those of competitors, and what markets it should be in. *Phase two* involves the garnering and the application of resources that enable the firm to improve its processes and develop new products and service offerings. Such a firm will have experienced some success financially and enough to justify its managers' intention to develop the firm as an organization. *Phase three* is when the firm begins to develop a greater capacity to integrate all of its resources, especially those that can be directed to helping the firm grow and contract its operations, as well as appropriate the required level of value from its resources whenever there is scope or a justification for achieving this objective. Once passed this phase the firm will then move into *phase four*. In this phase, the firm begins to develop partnering arrangements with other firms and/or supplier or customer networks. Around this time, the firm will have identified opportunities to benefit from cooperation. The firm will have entered *phase five* when it begins to develop a stronger appreciation of the potential of its resources and can identify which competencies the firm possesses that have enabled it to develop a distinct place in the marketplace. It is most likely that a firm at this point in time is extremely competitive and may have the capacity to sustain a competitive advantage for a considerable length of time. When a firm is able to move to *phase six* it will be able to consider itself a major player in the marketplace because it possesses resources that it can demonstrate are directly

related to it earning persistent above average returns. Such resources are also directly related to the firm being either liquid enough or able to command enough capital that it can expand itself and/or enter new markets by acquiring other firms. Because a firm's assets and its capabilities will need to be frequently developed to conform with the firm's stage in its life-cycle and in accordance with the performance objectives of the firm's owners, the framework can also show that distinct differences will exist between the resource investments of the firm at start-up or a small single business firm and a large multi-business firm.

Owner's payments. Underlying this discussion of firm's life-cycle is the assumption that the firm's owners' performance objectives will differ at different stages of a firm's life and this will have a bearing on the nature of the resource investments that the firm will make. The fact that a firm's owners need to be paid even if only occasionally is depicted in **Figures 1, 3, 4 and 5**. The owners' willingness to invest in the firm is a resource of the firm of a particular kind. Even if the firm's owners are ultimately never paid by the firm, the promise that they may be paid may be enough to ensure they do not withdraw their investment and continue to support the firm. As indicated by the four diagrams, what is left over after paying the costs associated with having a certain resources on hand will belong to the firm's owners. This is analogous to Porter's generic value chain and the fact that if a firm is efficiently configured, then the firm will be profitable. This is the 'margin' that Porter identified in his generic value chain diagram. Thinking in terms of our resource value chain, if the firm's resources are efficiently and parsimoniously configured, then it is likely that value is accruing to the firm and it is unlikely that it is being appropriated by people unentitled to a share in it.

SECTION THREE: THREE ACTIVITY-BASED VALUE CHAINS

The original value chain framework. The value chain is a method for representing the firm and decomposing it into functional units and then into the discrete strategic activities that the firm needs to engage in. The firm is described as 'a collection of activities that are performed to design, produce, market, deliver and support its product' (Porter, 1985: 36). These activities make it possible for the

firm to compete in the marketplace and include categories of activities or batches of business processes, such as in a sales department. The benefit of viewing the firm in value chain terms is that it becomes possible to better determine which activities the firm should engage in to more efficiently accommodate customers than competitors: *The value chain displays total value, and consists of value activities and margin. Value activities are the physically and technologically distinct activities a firm performs. These are the building blocks by which a firm creates a product valuable to its buyers* (Porter 1985: 38). The activities that the firm can engage in can be further divided into whether they are a primary or support activity. Primary activities are directly involved in enabling the firm to produce and deliver valuable products and services to the firm's customers.

Thus, a firm's value chain may or may not model the flow of production in a firm, and although it can help to identify how a firm might make strategic improvements as they relate to each of the firm's activities, it may or may not provide insight into how a firm might re-engineer its processes. However, the firm's primary activities will be invariably linked. The value chain framework is a logical extension of the argument that industry profits and, in turn, firm-level profits are affected by the differences in the bargaining power of suppliers, firms and buyers within the same industry. It is also a logical extension of Porter's five competitive forces framework, in particular, the argument that a firm's industry's profit potential is best measured in terms of the long-run return on invested capital. Thus, if a firm is able to identify the right kind of activities to engage in, it will be able to earn profits that are above the industry average (Porter, 1980). This means that if the value chain is used as an analytical framework, it becomes possible to engage in both first-order and second-order analysis of the firm, such as any economies of scale the firm might have or advantages it might possess by being able to vertically integrate. 'Sullivan & Geringer, 1993).

Although Stabell and Fjeldstad (1998) agree with Porter (1985) that a firm's activities are the means by which a firm is able to create products and services that are valuable to customers, they believe it is only able to describe manufacturing firms or firms that are similar to firms in manufacturing. This led Stabell and Fjeldstad to build on the idea that the firm's products are indeed

the medium by which value is transferred to its customers, and develop two other value chain configurations. These value configurations are the value shop and the value network. They too are activity-centric and a means by which the firm can be conceptually decomposed. The value shop is most appropriate to use when dealing with firms that are technology intensive and where the configuration of the firm's activities needs to address customers' problems, as might be the case when a firm sells professional services or high technology solutions, for example, an accounting practice, a medical facility or an oil exploration firm. The value network, on the other hand, is more appropriate to use when firms use a mediating technology of some kind to link customers to each other and help them communicate with each other, such as telecommunications companies or banks providing electronic services. In common with value shop analysis, value network analysis requires a strong understanding of those drivers of competitive advantage that create high levels of value for the firm's customers. Even though firms that are value networks usually operate in industries with relatively high barriers to entry, they will still need to keep their costs in check, create synergies through learning and identify how to position the firm to increase the firm's vertical and horizontal scope. By keeping costs low, the firm should be able to increase its market reach, be more profitable and/or increase its value in real terms. This is evident in many industries, such as the media and communications industries, where high levels of convergence is already taking place (Wirtz, 2001). Thus, managers need to constantly think about how their firm's activities might be modified to enable the firm to meet its strategic objectives and how the firm's current stock of resources could be used. Managers must continually determine whether the firm possesses some resources that are more important than others (Ramirez, 1999).

SECTION FOUR: A BANK'S BASEL II OPERATIONAL RISK PROJECT

In this section we will describe a Basel II implementation project at large Australian retail bank, which we believe is an example of managers applying the principles of a resource value chain.

The project and the resources that make it up. The Basel II project at the bank had been in

progress for a period of 18 months before we became involved. At this juncture, there were six subprojects of the Basel II project, which were all designed to ensure the bank would be able to implement Basel II by February 2006. February 2006 is when all the banks taking part in the Basel II accreditation process, in consultation with their regulatory body, were expected to do a parallel run of the old system for analyzing and making provision for the bank's operational and credit risks and the new system, which the Basel II framework represents. The parallel run would go for a period of at least a year and would verify that the participating bank had indeed implemented a system for analyzing and making provision for its operational and credit risks that was accurate and which was on par with what was being determined for other banks of comparable size and emphasis from around the world. One of the priorities of this system was to ensure that the participating banks were in a position to (1) accurately calculate how much capital needed to be put aside to cover its operational risks (or a provision for its operational risks), (2) operational risk data was centralized, (3) where operational risk data was collected in databases in ancillary systems, ensure these systems could be reconciled with the data warehoused in the central database, and (4) ensure the bank had systems in place to ensure that it could continually improve on its ability to analyze, manage and report on its operational risks, and embed this in its performance management system. The bank would be accredited by APRA,³ who is responsible for determining its compliance with Basel II.

Figure 6 is an overview of the project at the 18 month mark to the 24 month mark, where a project review was conducted. The project review was conducted just after Quiz 5, which is a survey that all the banks participating in the Basel II process take part in. These banks volunteer statistics about their operational risks, including a figure for their capital calculation. As **Figure 6** shows, there were four subprojects or (focal) resource investments, as described in this paper, that would be critical for this process or the project to satisfactorily engage in Quiz 5. These resources were funded by Operational Risk, while the other dozen subprojects/ resource investments were funded by the other participating groups or divisions. Resources were garnered from around the bank to ensure that operational risk data

³ The Australian Prudential Regulation Authority (APRA) is the prudential regulator of the Australian financial services industry.

could be migrated to a centralized database system. This database (or data warehouse) was built by the Intranet Development Unit and could generate accurate, valid, meaningful and timely reports. The centralized data could be used to calculate the bank's operational risk capital allocation.

INSERT FIGURE 6, 7 & 8 HERE

The operational risk monitoring, management and reporting competency. **Figure 7** is a rarefied view of one of the competencies that the Basel II implementation project was meant to consciously develop and which it subsequently did develop. It shows that because the Cards and IT operational risk databases would not be retired their data needed to be diverted to the newly designed and developed operational risk central database, and all the regional databases that were retired needed to have their data successfully migrated to the new system. In both situations, newly identified operational risk data would be entered into the centralized system either automatically or by the person who identified the risk. Depending on the type of risk and the sums of money involved, the risk would be monitored, managed and reported on by an appropriate officer of the bank. **Figure 7** also shows that by having this competency in place, the Operational Risk Calculation Team was able to get access to enough information to participate in Quiz 5, and the regions or the other divisions in the bank were now much closer to having access to one source of information that they could use to understand and report on their risks.

The facilitation competency. **Figure 8** shows how the individual teams that had been involved in ensuring that the regions and divisions of the bank were moved out of the Basel II project after Quiz 5 and back under the control of the regions and divisions, who were funding them in the first place. The Basel II data migration and reporting design teams, and the corporate risk function was wound down. Although this had not been an objective of the Basel II project originally, this was the outcome for the project after it was reviewed following Quiz 5. As **Figures 6, 7 and 8** show, the bank needed to make a change to how it operated,⁴ in particular, how it collected data about its operational risks and then managed them. However, it was not in a position to identify which business processes needed to be put in place straight away. By taking a resource-based view, it was possible to identify how critical information would be transferred to the central database and who would be responsible for validating its quality. One can also understand which parts of the bank were funding different parts of the Basel II project, and the points in time that satisfactorily completed parts of the project were transferred to the core business.

CONCLUSION

Although it may never be possible to identify the optimal configuration for a firm or, much less, make it a reality, it will always be important for managers to strive towards attaining this ideal wherever possible. With this in mind, this framework builds on many of the principles that underlie Porter's generic value chain. Among other things, it can help managers understand how changes in the configuration of a firm's value creating activities might affect the firm's resource structures. It can also provide an overview of how managers typically accumulate, combine and deploy their firm's resources to ensure the firm is able to succeed in the marketplace and perform to expectations. One of the advantages of using our resource chain framework is that it can explain how the firm changes over time, and provide considerable insight into how different resource investments and their cumulative effects impact on the firm's performance.

⁴ This would constitute a number of sub-activities in the primary activity of operations in the generic value

In our resource value chain, activity-based logic is only applied in how the firm strategically directs its various resource investments, that is, how a particular area of the firm or manager is given a budget and the responsibility to advance a key part of the firm's strategy, which might include the task of building a competency within the firm. Another advantage of our resource value chain is that one should be able to observe how the firm accrues value through its various resource investments and then uses this accrued value to accrue even more value. By focusing on different time-frames or by comparing the differences in the firm's aggregated resource investments at different points in time, it becomes easier to understand how the firm has evolved over time, and which firm-level resourcing behaviors were integral to the more positive aspects of the firm's evolution. One should also be able to understand the effects of the firm developing a particular mode of organization, hierarchical structure or a particular method for rewarding its managers, the effects of learning or knowledge transfer, and whether the firm is subject to certain path dependencies that it may never be able to transcend.

chain.

REFERENCES

- Amit, R. & Schoemaker, P.J.H. 1993. Strategic assets and organizational rent. *Strategic Management Journal*, 14, 33-46.
- Barney, J.B. 1986. Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32(10): 1231-1241.
- Barney, J.B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99-120.
- (2001). Is the resource-based "view" a useful perspective for strategic management research? Yes. *Academy of Management Review*, 15, 41-56
- Barney, J.B. & Arikan, A.M. 2001. The resource-based view: origins and implications. In Hitt, M.A., Freeman, R.E. & Harrison, J.S. *The Blackwell Handbook of Strategic Management*, 124-188. Oxford, UK: Blackwell Publishers.
- Collis, D. 1994. How valuable are organizational capabilities? *Strategic Management Journal*, 15, 143-152.
- Denrell, J., Fang, C. & Winter, S.G. 2003. The economics of strategic opportunity. *Strategic Management Journal*, 24, 977-990.
- Eisenhardt, K.M. & Martin, J.A. 2000. Dynamic capabilities: What are they? *Strategic Management Journal*, 21, 1105-1121.
- Galunic, D.C. & Rodan, S. 1998. Resource recombinations in the firm: Knowledge structures and the potential for Schumpeterian innovation. *Strategic Management Journal*, 19, 1193-1201.
- Grant, R.M. 1996. Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109-122.
- Gulati, R. & Singh, H. 1998. The architecture of cooperation: managing coordination costs and appropriation concerns in strategic alliances. *Administrative Science Quarterly*, 43, 781-814.
- Castanias, RP and Helfat, CE 2001. The managerial rents model: Theory and empirical analysis. *Journal of Management*, 27, 661-678.
- Helfat, C.E. & Peteraf, M.A. 2003. The dynamic resource-based view: Capability life-cycles. *Strategic Management Journal*, 24, 997-1010.
- Henderson, R. & Cockburn, I. 1994. Measuring competence? Exploring firm effects in pharmaceutical research. *Strategic Management Journal*, 15, 63-84.
- Hinterhuber, A. 2002. Value chain orchestration in action and the case of the global agrochemical industry. *Long Range Planning*, 35, 615-635.
- 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: 417-457.
- Kogut, B. & Zander, U. 1992. Knowledge of the firm, combinative capabilities, and the replication of knowledge. *Organization Science*, 3, 383-397.
- Lei, D, Hitt, MA & Bettis, R. 1996. Dynamic core competences through meta-learning and strategic context. *Journal of Management*, 22(4), 549-569.
- Lippman, S.A. & Rumelt, R.P. 2003. The payments perspective: Micro-foundations of resource analysis. *Strategic Management Journal*, 24, 903-927.
- Mahoney, J.T. 2001. A resource-based theory of sustainable rents. *Journal of Management*, 27, 651-660.

- Makadok, R. 2001. Toward a synthesis of the resource-based and dynamic-capability views of rent creation. *Strategic Management Journal*, 22, 387-401.
- Oliver, C. 1997. Sustainable competitive advantage: Combining institutional and resource-based views. *Strategic Management Journal*, 18, 697-713.
- O'Sullivan, L. & Geringer, J.M. 1993. Harnessing the power of your value chain. *Long Range Planning*, 26, 59-68.
- Pavlovich, K. 2003. All that jazz. *Long Range Planning*, 36, 441-458.
- Peteraf, M.A. 1993. The cornerstones of competitive advantage: The resource-based view. *Strategic Management Journal*, 14, 179-191.
- Pierce, J.L., Boerner, C.S., & Teece, D.J. 2002. Dynamic capabilities, competence and the behavioral theory of the firm. In Augier, M. & March, J.G. *The Economics of Choice and Change*: 81-95. Northampton, USA, Edward Elgar.
- Porter, M.E. 1980. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: The Free Press.
- 1985. *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: The Free Press.
- 1987. From competitive advantage to corporate strategy. *Harvard Business Review*, 65, 43-59.
- 1991. Towards a dynamic theory of strategy. *Strategic Management Journal*, 12, 95-117.
- Prahalad, C.K. & Hamel, G. 1990. The core competence of the corporation. *Harvard Business Review*, 68, 79-92.
- Ramirez, R. 1999. Value co-production: Intellectual origins and implications for practice and research. *Strategic Management Journal*, 20, 49-65.
- Ray, G, Barney, JB and Muhanna, WA. 2004. Capabilities, business processes, and competitive advantage: choosing the dependent variable in empirical tests of the resource-based view. *Strategic Management Journal*, 25, 23-37.
- Schoemaker, P.S.H. 1990. Strategy, complexity and economic rent. *Management Science*, 36, 1178-1192.
- Spanos, Y.E. & Lioukas, S. 2001. An examination into the causal logic of rent generation: Contrasting Porter's competitive strategy framework and the resource-based perspective. *Strategic Management Journal*, 22, 907-934.
- Stabell, C.B. & Fjeldstad, O.D. 1998. Configuring value for competitive advantage: On chains, shops, and networks. *Strategic Management Journal*, 19, 413-437.
- Teece, D.J., Pisano, G. & Shuen, A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, 18, 509-533.
- Wernerfelt, B. 1984. A resource-based view of the firm. *Strategic Management Journal*, 5, 171-180.
- Winter, S.G. 2003. Understanding dynamic capabilities. *Strategic Management Journal*, 24, 991-995.
- Wirtz, B.W. 2001. Reconfiguration of value chains in converging media and communications markets. *Long Range Planning*, 34, 489-506.













