

From Penrose to Sirmon: The Evolution of Resource Based Theory

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Abstract

RBT has grown rapidly and become one of the most important theories in strategic management. This paper examines the development of RBT from the initial concept to several contemporary ideas that have grown rapidly in recent years. The exploration uses literature study approaches. This study is expected to provide a comprehensive overview of the historical roots, definitions, relationships between concepts and the direction of contemporary development. The contemporary direction of RBT leads to the integration of resources orchestration with economic theory, the exploration of the microstructure of RBT and the practical implementation of resources orchestration.

Keyword: Resource-based theory, dynamic capability, resource orchestration.

Introduction

Resource-based theory (RBT) has undergone a very long evolutionary process. This concept is in fact rooted in Edith Penrose's 1959 thought that states the firm as a bundle of resources (Penrose & Pitelis, 2009). Edith Penrose's idea in 1959 re-developed in the decade of 80s until the early decade of the 90s, that called resource based theory (RBT). Thesis, antithesis, synthesis has formed a new face of RBT today. There are various contemporary concepts that evolve, such as knowledge base theory (Nonaka & Nishiguchi, 2001), dynamic capability (Teece, et al., 1997), resource management (Sirmon, et al., 2011), asset orchestration (Adner & Helfat, 2003; Helfat, et al., 2007) and resource orchestration (Sirmon, et al., 2011).

RBT has grown rapidly and become one of the most important theories in strategic management. This paper examines the development of RBT from the initial concept to several contemporary ideas that have grown rapidly in recent years. This study is expected to provide a comprehensive overview of the historical roots, definitions, relationships between concepts and the direction of contemporary development.

This paper consists of 6 sections. After the introduction in the *first* section, the *second* section discusses the basic concepts as well as the definitions of resources and capabilities. The *third* session discusses the RBT awakening process, from the crisis in the product side perspective, the

foundation of RBT, the criticisms and the future of RBT. The *fourth* section elaborates the process view of RBT, from the perspective of knowledge management, dynamic capability and resource orchestration. The full picture of the development of the RBT is showed in the *fifth* session. The *final* section describes the conclusions of this study.

Conception of Resources

The word "resources" has wide and varied meanings. In biological studies resources are the elements that the organism needs to grow, develop and reproduce normally (Miller, 2006). If resources are consumed by one organism then they become unavailable to other organisms. Economics views resources as services or assets used to produce goods and services. Economics itself is the study of how society manages scarce resources (Mankiw, 2014). On the other side, management science has different conceptions. Jay Barney defined resources as all elements, from assets, capabilities, knowledge, information, organizational processes to attributes, controlled by companies to understand and implement strategies to drive efficiency and effectiveness (Barney, 1991).

There are many resource typologies, such as financial, physical, human, organizational (managerial), technological and relational. Table 1 describes the definitions, examples and references in each resource typology (Turino, 2018). Financial resources are monetary factors in various forms, for example cash, operating profit, earnings, and others. Physical resources are tangible and non-monetary factors, such as equipment, buildings, plant, machinery, land and so on. Human resources are knowledge-based factors inherent in individuals or groups such as knowledge, experience, intuition and expertise. Organizational resources are factors inherent in the process of interaction and coordination, such as norms, culture, procedures, control systems, structures, and so forth. Technology resources describe the company's ability to transform inputs into outputs, such as patents, manufacturing technology, and so on. Relational resources describe the credibility, legitimacy or quality of relationships with external parties. Examples of relational resources are reputation, brand, and relationship with government, distribution system, and so forth.

Table 1. The definitions, examples and references in each resource typology (Turino, 2018).

Resource	Definition	Example	Reference
Financial	Monetary factors in various forms	Cash, operating profit, investment, earnings	Grant (1991), Ireland et al (2003), Teece et al (1997)
Physical	Tangible and non-monetary factors	Tools, equipment, building, factory, machine	Barney (1991), Grant (1991)
Human	Knowledge-based factors stuck in the individual or group	Knowledge, experience, intuition, expertise	Barney (1991), Fernandez et al (2000), Hall (1992, 1993), Ireland et al (2003)
Organization (managerial)	Factors that provide the context of how personnel interact and coordinate	Norm, culture, prosedures, database, control system, contract, structure	Barney (1991), Fernandez et al (2000), Hall (1992, 1993), Ireland et al (2003)
Technological	Factors that describe the ability of a firm to transform input into output	Patent, trade mark, trade secret, copy right, manufacturing technology	Fernandez et al (2000), Galbreath (2005), Hall (1993)
Relational	Factors that describe the credibility, legitimacy, or quality relation with external	Reputation, brand, relation with regulator, distribution system	Fernandez et al (2000), Galbreath (2005), Hall (1992, 1993), Ireland et al (2003), Teece et al (1997)

Richard Hall described two important components of the resource: assets and capabilities. (Hall, 1993). Assets are something the company has, whether it is tangible (such as physical assets or financial assets,) or intangible (such as expertise, knowledge, corporate systems, reputation, loyalty, etc.). Capabilities are something that companies do to exploit assets, such as operational capabilities and dynamic capabilities. Capabilities are business processes that reflects the organizational knowledge (Teece, et al., 1997) to combine or utilize resources to perform specific functions (Helfat & Peteraf, 2003). The bundle of knowledge has advanced to the primary determinant of competitive advantage (Sirmon, et al., 2007).

There are very fundamental differences between operational capability and dynamic capabilities, as shown in Table 2 (Turino, 2018). Operational capability is routines to perform basic functions (Lee & Teece, 2013). It often called ordinary capability or lower or second order capability. Examples of operational capability is delivery process, just-in-time inventory, reporting system, and so forth. The success indicator is effective and efficient in performing its function. Dynamic capabilities is routines to create, extend or modify firm resource base (Helfat, et al., 2007). This capability is often called higher or firs order capability. Examples of dynamic capability is routine to create, extend or modify delivery process, inventory system, and so forth. The success of this capability is determined by the company's ability to survive or grow in dynamic environments. Capabilities related to environmental conditions. Operational capability tends to match a relatively stable environment, while dynamic capabilities are more fit with the turbulent environment.

Table 2. Difference between operational capability and dynamic capability (Turino, 2018).

	Operational Capability	Dynamic Capability
Definition	Routine to purposefully perform basic function in a firm (Lee & Teece, 2013)	Routine to purposefully create, extend, or modify firm resource base (Helfat et al, 2007)
Also known as	Ordinary capability, lower or second order capability	Higher or first order capability
Example	Delivery process, just-in-time inventory, reporting system, disbursement procedure	Routine to create, extend, or modify delivery process, just-in-time inventory (including other assets)
Indicator of success	How effective and efficient a capability performs its intended function	How well this capability enables a firm to survive, and perhaps grow, in a dynamic environment
Suitable	Valuable when environment is relatively stable	More valuable in turbulent environment

The Awakening of RBT

Crisis in Product Side Perspective

The dominant school of thought in the 80s was exploring the competitive advantage from the product side or the firm's external environment. Michael Porter introduced the "Five Forces" as a tool to analyze industry and competition (Porter, 1980) and since that time this framework has been very popular and adapted in business schools. Porter stated that competitive advantage can be achieved if the company has a unique and valuable strategic position in the market. There are 3 main strategies offered to achieve competitive advantage, such as cost leadership, differentiation and focus (Porter, 1985).

In 1984 Birger Wernerfelt offered a different view than the mainstream at the time. Wernerfelt emphasized the investigation of the firm's strategic choice from the resource side (Wernerfelt, 1984), as complement to product side perspective. Companies can build optimal strategic positions on the product side, by analyzing strengths and weaknesses in the resources side. Wernerfelt tried to bridge the gap between Porterian's perspectives on the product side with resource-side perspectives. He contributed to encouraging resource side perspectives, explaining that markets are imperfect and the impact of resource development on corporate performance. Porter has assumed that all resources can be obtained equally or the resource market is perfect. In fact the firm's access to resources is limited and unequal. There are many resources that are difficult to access and acquisition costs increase when resource owners know its potential value (Barney, 1986). If acquisition costs increase companies may have differentiation in the market, but they no longer have competitive advantage.

Porterian's basic idea is that competitive advantages can be achieved if the company is in an attractive industry. However this concept has failed to explain the phenomenon of many successful companies, although not in an attractive industry, such as Southwest (airline) and Walmart (retail). Barney argued that some companies can succeed, despite being in a bad

industry, because they successfully develop resources that meet customer expectations. He viewed organizational culture as the source of competitive advantage (Barney, 1986).

Empirical studies conducted by Richard Schmalensee showed that only 20% of the firm's performance variance can be explained by industrial factors (Schmalensee, 1985). Richard Rumelt founded almost similar results that only 16% of variance in company performance can be explained by industrial factors (Rumelt, 1991). Olson, van Bever and Verry showed that external factors such as regulation, economic downturn and geopolitics only contribute 13% (Olson, et al., 2008). This study also shows that the source of growth is dominated by internal factors.

Foundation of RBT

Prior to Wernerfelt (1984) there had been some thought that discussed the role of resource factors in shaping competitive advantage. David Ricardo stated that economic rent can be realized if the firm has more valuable lands (resources), such as more fertile soil and closer distance to the market (Ricardo, 1817). Philip Selznick further elaborated the role of leadership in building the institutional competence to survive in its environment. Land and entrepreneurship basically are factors of production or inputs or resources. In 1959 Edith Penrose stated that the firm basically is bundles of resources and the heterogeneity of the firm arises from the difference of resources and how it is developed (Penrose & Pitelis, 2009). To achieve an abnormal return, companies need to perform processes that often contains causal ambiguity that is difficult to imitate by competitors (Lippman & Rumelt, 1982).

Post-Wernerfelt (1984), resource-based view has evolved by emphasizing resource immobility and resource heterogeneity. Barney (1986) explained that the resource market is imperfect. Managers who can see superior information, which cannot be seen by others, will bring a competitive edge to the company. Not all of the required resources are available in the market, so companies must develop internally and make it difficult to imitate (Dierickx & Cool, 1989). To generate benefits for the company then ex ante acquisition cost must be smaller than ex post resource value (Rumelt, 1987). Barney stated that VRIN criteria (valuable, rare, imperfectly imitable, non-substitutable) are the determinants for realizing sustainable competitive advantages (Barney, 1991). In 1995, Barney developed the VRIN framework (value, rareness, imitability, organization), from the improvement of the VRIO model, as a tool for analyzing internal strengths and weaknesses (Barney, 1995).

"Valuable" resources are those that can increase profits or lower costs. It will encourage the efficiency and effectiveness of companies by exploiting opportunities or reducing threats from the environment. "Rare" occurs when demand for resources exceeds supply, so it is owned by only a few companies. "Inimitability" or non-substitutability is a concept when resources are difficult to duplicate due to limited knowledge, time, energy, capital, or due to complex linkage with other social factors. "Organization" is related to the ability to manage resources so that the company becomes more effective and efficient, even when compared to other companies that have similar resources.

Margaret Peteraf in 1993 discussed the 4 conditions underlying sustainable competitive advantages (Peteraf, 1993). The first condition is resource excellence in heterogeneous industries. The second factor is imperfect mobility because it cannot be traded or difficult to access in the market. The third condition is the post limits to competition, because it is imperfect imitability and imperfect substitutability. The fourth factor is ex ante limits to competition

because the firm can manage acquisition and deployment costs. These four conditions are quite similar to the VRIO concept from Barney (Barney, 1991; Barney, 1995).

Criticisms and the Future of RBT

RBT has developed rapidly in recent decades and has become an important theory in strategic management. Barney, Kitchen and Wright describes the development of RBT using product life cycle perspective (Barney, et al., 2011) which divide 4 stages: introduction, growth, maturity and decline. Before 1991 RBT was in the introduction stage. In 1992-2000 RBT entered the growth stage. The researches discussed various fundamental concepts of RBT, the differences between resources and capabilities, combinational capabilities, dynamic capability, natural resource based view, and knowledge based view. After 2000 RBT has entered the maturity stage. These studies discussed RBT contributions in various fields of research, such as property rights theory, entrepreneurship, human resource management, organizational theory, and so on. RBT has coordinated with other theories in strategic management studies, such as with mergers & acquisitions, diversification, competitive dynamics, transaction cost economy and technology management. RBT has also coordinated with other theories beyond strategic management field such as international business, marketing, entrepreneurship, organization theory and behavior, operation management and human resource management.

The future challenge is "whether RBT will enter the decline stage or it will be revitalized". Barney, Ketchen and Wright mentioned 5 research themes that determine the future development of RBT, namely: micro foundations of RBT, resource measurement methods, relationships with sustainability, relationships with other perspectives, resource acquisition and development processes (Barney, et al., 2011).

Table 3. Some significant critiques to RBT (Turino, 2018).

Critique	Impact
RBT defined resources too broadly. They were treated in the same way (Kraaijenbrink et al, 2010)	Need deeper understanding which resources provide greater impact on firm performance (especially in term of asset)
RBT was just an advise or ex post explanation why some firms outperform the others (Priem & Buttler, 2001)	Less useful for manager due to not providing practical guidance of how firms should develop their resources
RBT almost ignored the effect of external environment (Teece & Pisano, 1994; Teece et al, 1997)	<ul style="list-style-type: none"> • VRIO resources can not explain why many leading firms collapsed in a disruptive environment • VRIO is context-specific. RBT cannot be applied generally in different situation, e.g. beyond national market
VRIO resources do not guarantee SCA if firms manage them badly (Sirmon et al, 2007)	
RBT assumed initial firm resource base is given (Ahuja & Katila, 2004; Alvarez & Busenitz, 2001; Kunc & Morecroft, 2010)	Little is known about where the resources come from, and why firm acquires or accumulate a particular resource

There are some significant critiques to RBT, as shown in table 3, which will have an impact on the future development of this theory. The *first* criticism is the definition of RBT that is too broad. We require deep understandings of the impact of different resources on firm performance. The *second* issue is that RBT only focuses on ex post explanation. RBT should provide practical

guidance on how firms develop their resources. The *third* problem is the RBT almost ignores the effects of the external environment and does not explain why many companies fail in disruptive environments. The *fourth* criticism is that RBT assumes the initial resource is given and does not explain about where the resources come from.

Process View of RBT

Knowledge Management

RBT is closely related to knowledge-based theory (KBT) which sees knowledge as the most strategic resource for the firm. KBT assumes that knowledge is the most important resource for firm that is difficult to imitate. Knowledge is at the individual level. Learning process follows the spiral path, from individual to organizational level, and conversely. The company's challenge is how to integrate individual knowledge to create firm knowledge and use it to generate commercial benefits. There are 4 characteristics of knowledge: dynamic, context-specific, humanistic, and can be tacit or explicit (Nonaka & Nishiguchi, 2001). Knowledge is dynamic because it is created in social interaction. The interaction presences between individuals are context-specific or dependent on time and space. Knowledge is also humanistic or influenced by commitment, trust, logic, cognition and emotion. It can appear explicitly or implicitly (tacit knowledge).

There are 3 stages in knowledge management, namely knowledge creation, knowledge sharing and knowledge use. Knowledge creation involves finding, identifying, and gaining the required knowledge from internal and external sources. Knowledge sharing is an attempt to assimilate or transfer knowledge among personnel, between functions, between organizations. This process is not simple because knowledge is attached to the individual and often has causal ambiguities between each other. Knowledge sharing requires high motivation from the source and the recipient. On the other side knowledge use involves the process of transforming existing knowledge to produce certain goods and services.

Ikujiro Nonaka built the SECI model of knowledge dimensions that discusses how tacit (implicit) knowledge and explicit knowledge are transformed into organizational knowledge, as shown in figure 1. This model discusses 4 modes of knowledge conversion. The *first* is tacit to tacit (socialization). It explains the process of social interaction as tacit to tacit knowledge transfer, for example in discussion or brainstorming. The *second* is tacit to explicit (externalization). This dimension discusses the process of transformation of tacit knowledge into explicit knowledge, for example in the process of making concepts, drawings, and written documents. The *third* is the transformation from explicit to explicit (combination). Some explicit knowledge is collected, combined, modified or processed to form new explicit knowledge to be disseminated among members of the organization. The *fourth* is explicit to tacit (internalization). This is part of individual or group reflection on explicit knowledge to be a tacit knowledge that can be useful in the future.

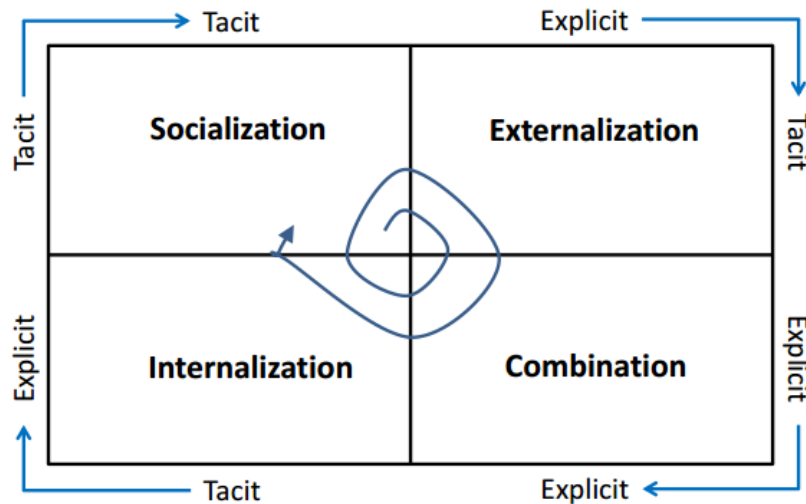


Figure 1. The SECI model of knowledge dimensions.

Organizational knowledge is related to organizational learning, which consists of three simultaneous mechanisms: experience accumulation, knowledge articulation and knowledge codification (Zollo & Winter, 2002). Experience accumulation is formed from learning-by-doing trial-and-error process that result a collection of tacit knowledge. Knowledge articulation encompasses the process of disseminating knowledge among individuals through discussions or lectures. On the other side, knowledge codification attempts to compose or describe to be explicit knowledge, such as through blueprints, information systems, books, and so on.

Dynamic Capability

Firm is not in a closed system but exists in an open system that interacts with the environment. David Teece, Gary Pisano and Amy Shuen (1997) stated that in a rapidly changing environment, the firm's ability to change firm resource base has a strategic role in generating competitive advantage. Dynamic capabilities is routines to create, extend or modify firm resource base (Helfat, et al., 2007). Teece, Pisano, and Shuen have described the 3 dynamic capabilities needed in rapidly changing environments: (1) the ability to learn and quickly build new strategic assets (2) the ability to integrate new strategic assets into firm processes; and (3) ability to transform or reuse the deprecated assets (Teece, et al., 1997).

Dynamic ability is an important factor in creating, deploying and protecting intangible assets, which have significant roles in determining the firm's performance in the long term. There are three components of the dynamic capability process: sensing, seizing and reconfiguring (Teece, 2007). Sensing includes efforts to analyze systems and resources that can create new opportunities. This process involves seeking and filtering technology (knowledge and equipment) and markets (suppliers, consumers, distributors or business partners). Seizing encompasses the analysis of resources and organizational support needed to capture opportunities. This process includes business models, organizational structures, incentives, decision-making protocols and control systems. Reconfiguring is an effort to align resources to serve the needs of customers in the marketplace. This includes efforts to manage change and maintain innovation, coordinate assets and build self-organize teams.

Organization is determined by the top management decisions or the upper echelon (Hambrick & Mason, 1984). The organization's strategic choice is determined by the upper managerial background. The cognitive processes of top managers are crucial in strategic decision making. Adner & Helfat (2003) described the significance of dynamic managerial capabilities or the ability of managers to synchronize the organization's internal capabilities with changing external environment (Adner & Helfat, 2003). Managers must be able to creatively locate and seize opportunities in the external environment as well as be able to build, expand, and modify internal resources.

There are 3 components of dynamic managerial capability, namely: managerial human capital, managerial social capital and managerial cognition (Adner & Helfat, 2003). Managerial human capital is the knowledge and technical expertise accumulated through the learning process. Managerial social capital is the ability to establish relationships with other parties, making it easier to access information and resources. Meanwhile, managerial cognition includes the ability of mental activity, such as: learning, unlearning attention, intuition, judgment and reasoning.

Resource Orchestration

Resource management emphasizes actions taken by managers to improve company performance. This idea was built from RBT, environmental contingency and KMT. Resource management is closely related to environmental factors, as shown in Figure 2 (Sirmon, et al., 2007). It simultaneously affects the value provided to consumers and shareholders. There are feedbacks that creates two-way interactions between the value given to consumers and shareholders to the resource management capacity.

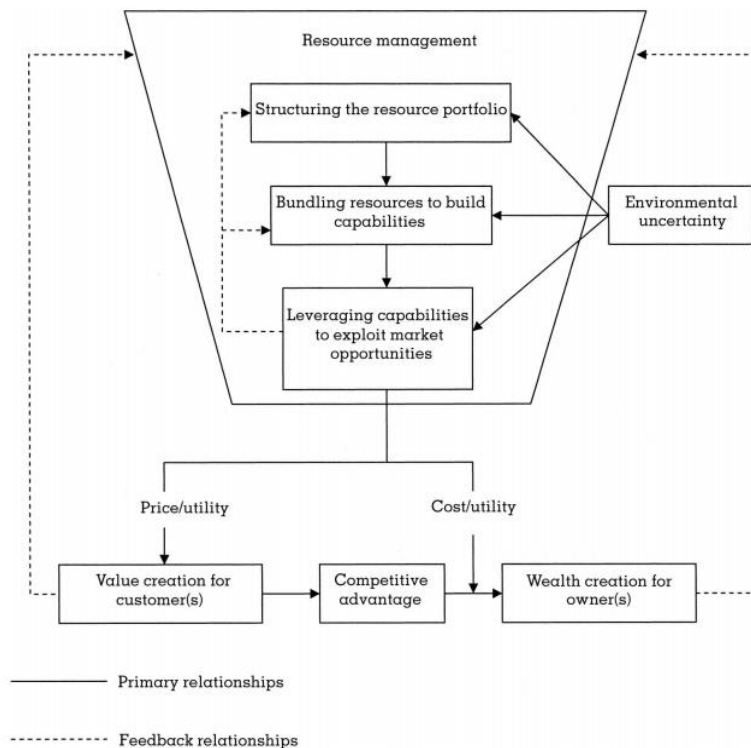


Figure 2. A dynamic model of resource management of value creation (Sirmon, et al., 2007). Resource management can be built through structuring, bundling and leveraging resources and capabilities (Sirmon, et al., 2007). Structuring is the effort of managing the company's portfolio, thus generating resources. Bundling is an attempt to combine assets to produce capability. Leveraging is an attempt to use the capability to serve the consumer, thereby create value for the company.

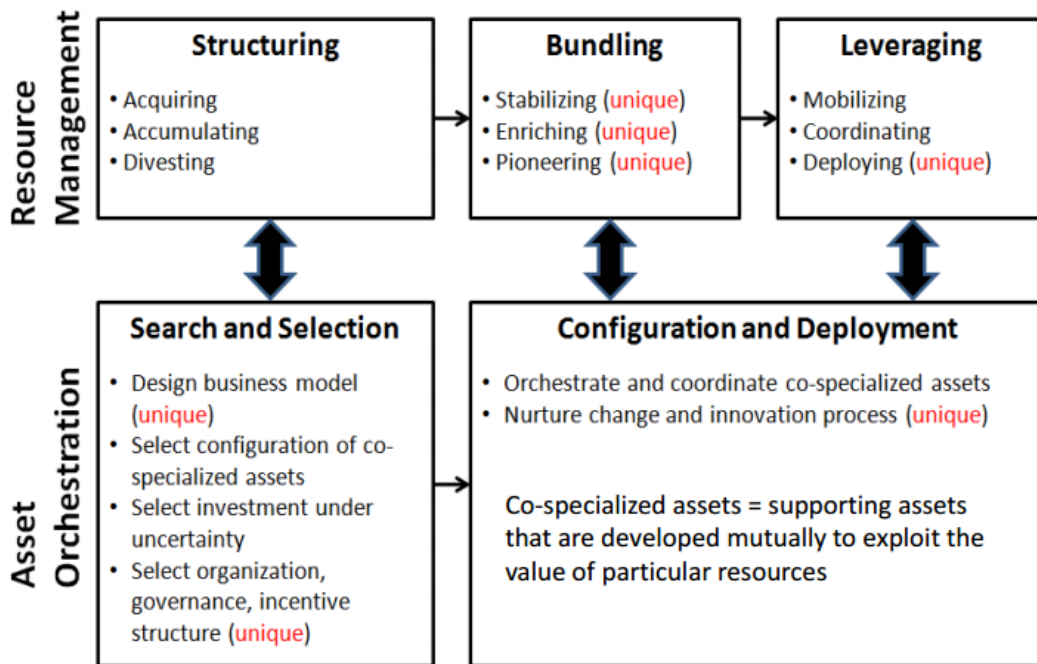


Figure 2. Resource orchestration as an integration between resource management and asset orchestration (Sirmon, et al., 2011).

Sirmon, et al. (2011) integrated the concept of resource management and asset orchestration. This integration created a new synthesis that called resource orchestration (Sirmon, et al., 2011), as shown in figure 2. Asset orchestration consists of 2 stages: search and selection, configuration and deployment. Search and Selection includes attempts to design unique business models, choosing configurations, investments, organizations, governance and incentive structures. It is compatible with structuring stage in resource management. On the other side, configuration and deployment consists of orchestrating and coordinating assets, managing change and innovation processes. This part is compatible with bundling and leveraging stages in resource management

The Evolution of RBT

RBT has undergone a very long dialectical process. Thesis, antithesis, synthesis has formed a new face of RBT today, as shown in Figure 3. Edith Penrose's idea in 1959 re-developed in the decade of 80s until the early decade of the 90s, that called resource based view (RBV). In the mid 90's decade developed a perspective of KBT, which sees knowledge as a primary resource for competitive advantage. At the end of the decade 90 evolved the concept of dynamic capabilities that wanted to adapt RBV with the external dynamics of the environment.

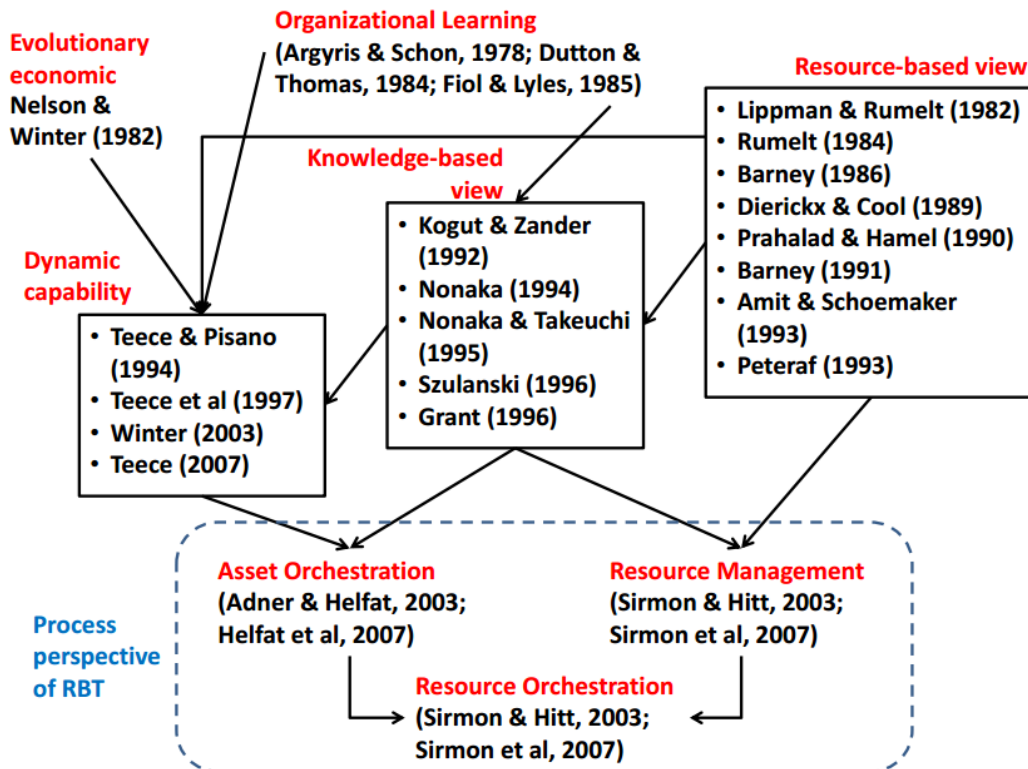


Figure 3. The evolution of thought in resource based theory (Turino, 2018).

In the early decades of 2000 appeared a number of new syntheses. Dynamic capabilities interact with KBT created the concept of asset orchestration (Adner & Helfat, 2003; Helfat, et al., 2007). Meanwhile, the integration between KBT and RBV established resource management concepts. The integration between these two contemporary concepts formed the concept of resource orchestration (Sirmon, et al., 2007).

Resources orchestration as a contemporary form of RBT has great potential to provide explicit insights into the role of manager actions in structuring, bundling and leveraging of firm resources. There are several research challenges that need to be elaborated further. The *first* is the relationship between resources orchestration with related theories in economics. The next theme is to strengthen the micro-foundation of resources orchestration. The last topic is the elaboration of the resources acquisition and resources development. This issue is very strategic for the implementation of resources orchestration in the future.

Conclusion

RBT has grown rapidly and become one of the most important theories in strategic management. This paper examines the development of RBT from the initial concept to several contemporary ideas that have grown rapidly in recent years. This study is expected to provide a comprehensive overview of the historical roots, definitions, relationships between concepts and the direction of contemporary development. The evolution of RBT has been very long, from the theory of firm growth from Edith Penrose (1959) to the concept of resources orchestration from David Sirmon (2007, 2011). The contemporary direction of RBT leads to the integration of

resources orchestration with economic theory, the exploration of the microstructure of RBT and the practical implementation of resources orchestration.

References

- Adner, R. & Helfat, C., 2003. Corporate Effects and Dynamic Managerial Capabilities. *Strategic Management Journal*, Issue 24, pp. 1011-1025.
- Barney, J., 1991. Firm Resources and Sustained Competitive Advantage. *Journal of Management*, XVII(1), pp. 99-120.
- Barney, J. B., 1986. Organizational Culture: Can It Be a Source of Sustained Competitive Advantage?. *The Academy of Management Review*, XI(3), pp. 656-665.
- Barney, J. B., 1995. Looking inside for Competitive Advantage. *The Academy of Management Executive*, IX(4), pp. 49-61.
- Barney, J., Ketchen, D. & Wright, M., 2011. The Future of Resource-Based Theory: Revitalization or Decline?. *Journal of Management*, XX(10), pp. 1-17.
- Dierickx, I. & Cool, K., 1989. Asset Stock Accumulation and the Sustainability of Competitive Advantage. *Management Science*, XXXV(12), pp. 1514-1514.
- Hall, R., 1993. A framework linking intangible resources and capabilities to sustainable competitive advantage. *Strategic Management Journal*, XIV(8), p. 607-618.
- Hambrick, D. & Mason, P., 1984. Upper Echelons: The Organization as a Reflection of Its Top Managers. *Academy of Management Review*, IX(2), pp. 193-206.
- Helfat, C. E. et al., 2007. *Dynamic Capabilities: Understanding Strategic Change in Organizations*. 1st ed. s.l.:Wiley-Blackwell.
- Helfat, C. & Peteraf, M., 2003. The dynamic resource-based view: capability lifecycles. *Strategic Management Journal*, XXIV(10), p. 997-1010.
- Lee, S. & Teece, D. J., 2013. The Functions of Middle and Top Management in the Dynamic Capabilities Framework. *Kindai Management Review*, Volume I, pp. 28-40.
- Lippman, S. A. & Rumelt, R. P., 1982. Uncertain Imitability: An Analysis of Interfirm Differences in Efficiency under Competition. *The Bell Journal of Economics*, XIII(2), pp. 418-438.
- Mankiw, N. G., 2014. *Principles of Economics*. 7th ed. s.l.:South-Western College.
- Miller, G. T., 2006. *Living in the Environment: Principles, Connections, and Solutions*. 15th ed. s.l.:Brooks Cole.
- Nonaka, I. & Nishiguchi, T., 2001. *Knowledge Emergence: Social, Technical, and Evolutionary Dimensions of Knowledge Creation*. 1st ed. s.l.:Oxford University Press.
- Olson, M., van Bever, D. & Verry, S., 2008. When Growth Stalls. *Harvard Business Review*, LXXXVI(3), p. 51-61.
- Penrose, E. & Pitelis, C., 2009. *The Theory of the Growth of the Firm*. 4th ed. s.l.:Oxford University Press.
- Peteraf, M. A., 1993. The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, XIV(3), p. 179-191.
- Porter, M. E., 1980. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. 1st ed. s.l.:The Free Press.

- Porter, M. E., 1985. *Competitive Advantage: Creating and Sustaining Superior Performance*. 1st ed. s.l.:Free Press.
- Ricardo, D., 1817. *On the Principles of Political Economy and Taxation*. 1st ed. London: John Murray.
- Rumelt, R. P., 1987. Theory, Strategy, and Entrepreneurship, in The Competitive Challenge. In: D. J. Teece, ed. *The Competitive Challenge: Strategies for industrial innovation and renewal*. Cambridge: Ballinger Publishing, pp. 137-158.
- Rumelt, R. P., 1991. How much does industry matter?. *Strategic Management Journal* , XII(3), p. 167–185.
- Schmalensee, R., 1985. Do Markets Differ Much?. *The American Economic Review*, LXXV(3), pp. 341-351.
- Sirmon, D. G., Hitt, M. A. & Ireland, R. D., 2007. Managing Firm Resources in Dynamic Environments to Create Value: Looking Inside The Black Box. *Academy of Management Review*, XXXII(1), p. 273–292.
- Sirmon, D. G., Hitt, M. A. & Ireland, R. D., 2011. Resource Orchestration to Create Competitive Advantage Breadth, Depth, and Life Cycle Effects. *Journal of Management*, XXXVII(5), pp. 1390-1412.
- Teece, D. J., 2007. Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, XXVIII(13), p. 1319–1350.
- Teece, D., Pisano, G. & Shuen, A., 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, XVIII(7), p. 509–533.
- Turino, H., 2018. *Lecture Note on Resource-Based Theory*, Depok: Universitas Indonesia.
- Wernerfelt, B., 1984. A resource-based view of the firm. *Strategic Management Journal*, V(2), p. 171–180.
- Zollo, M. & Winter, S. G., 2002. Deliberate Learning and the Evolution of Dynamic Capabilities and Organization Science. *Knowledge, Knowing, and Organizations*, XIII(3), pp. 339-351.