FIRM RESOURCE UTILIZATION AND ENHANCEMENT PROCESS: A PERSPECTIVE FROM THE FIRM PERFORMANCE

James M. Bloodgood[1*]

[1] Management, Kansas State University, Manhattan, Kansas, United States

[*] jblood@ksu.edu

Received: 11 March 2023 Accepted: 4 June 2023 Published: 28 June 2023

Abstract

This study expands the usefulness of economic theories of competition by amplifying the role of managerial perception in strategic decision making. In particular, decisions about resource use and enhancement are identified as being significantly influenced by managerial perception. Results of the conceptual analysis characterize resource misperception as leading to resource underleverage and overleverage. When resource underleverage occurs, competitive opportunities will be missed and resources will be targeted for enhancement or avoidance. When overleverage occurs, competitive hazards will be realized and resources will be targeted for maintenance. To observers these firm behaviors and outcomes do not follow a purely economic rationale.

Keywords: Organizational resources, Managerial perception, Organizational performance

Paper type: Empirical article

Introduction

Direct competitors engage in a variety of behaviors, both similar and different, in their quest to be competitive. Numerous factors, such as firm resources (Porter, 1985) and managerial discretion (Amit & Schoemaker, 1993), have been shown to be antecedents to these competitive behaviors. From a predominantly economic rationality perspective, much of the strategy literature has focused on which competitor has stronger resources and what the likely results of that are from a competitive advantage standpoint (Barney, 1991). Economic perspectives continue to make significant contributions to understanding firm behavior and outcomes. Fortunately, research in tangential areas has broadened and promoted the usefulness of economic theories. For example, subjectivist perspectives have included related and important factors, such as managerial perception, to help economic theories explain more extensive phenomena (Kor, Mahoney, & Michael, 2007).

As economic theories continue to make inroads into management literature, the addition of complementary perspectives increase their explanatory power. For example, at times smaller, weaker firms have out-competed their larger, stronger competitors (Yoffie & Kwak, 2002), which pure economic theories by themselves are less able to explain. To help explain this phenomenon, consistent with a subjectivist approach (e.g., Bylund & Packard, 2022; Kor et al., 2007), managerial perception is highlighted as a bridge between a

DOI: https://doi.org/10.11113/ijibs.v18.129

firm's resource base and its effort toward achieving external fit by leveraging its resources. As a result, it is proposed that managerial misperception can cause underleveraging and overleveraging of firm resources. These errors can lead to poor performance in the form of unrealized opportunities and realized hazards.

A firm's set of resources and their utilization drive its capabilities, actions, and performance (Le Mens, Hannan, & Pólos, 2011). This occurs in a context that comprises a variety of external factors such as competitors, changes in technology and sociocultural trends. These factors help influence a firm's strategic choices and their resulting outcomes (Barney, 1991; Wernerfelt, 1984). Thus, important resource building, acquisition, maintenance, and utilization become prerequisites for strong firm performance in areas like revenue generation (Giarratana, Pasquini, & Santalo, 2021) and innovation (Carnes et al., 2022). However, discordant resource leveraging and modification occur in firms to the extent that some firms experience poor performance compared to their peers.

From an economically rational perspective two questions are raised. First, why do some firms underleverage or over leverage certain resources? Second, why do some firms enhance certain resources when they rationally should not, and fail to enhance certain resources when they rationally should? A variety of factors could lead to these types of managerial missteps. Some missteps include inadequate information or processing, industry dynamism, and political power within firms.

Setting aside the arguments associated with whether or not there is a single, common reality, this investigation focuses on how managerial perception drives strategic decision making. In particular, perceptions associated with resource building and enhancement decisions are examined as to the outcomes that arise from accurate and inaccurate perception. Considering the above-mentioned discussions, this research aims to combine RBV and the AMC aspects to create a more comprehensive portrayal of resource utilization and enhancement. This approach can help partially answer why firms might underleverage or overleverage their resources, and why they might neglect improving some weaknesses or attempt to uneconomically improve some strengths.

The following sections include a literature review on relevant topics including the resource-based view (RBV) of the firm, and the awareness, motivation, capability, framework (AMC) and managerial perceptions. Propositions are then developed to better understand how resource status and perception accuracy interact to influence resource leveraging and resource maintenance and enhancement. Finally, the research and managerial implications of these interactions are discussed.

Literature Review

Resource-Based View (RBV) of the Firm

The RBV states that firm resources can lead to capabilities that may create distinctive competencies which can be the source of competitive advantage (Barney, 1991; Sirmon, Gove, & Hitt, 2008). In this sense, resources and their utilization act as an antecedent to firm behaviors and performance. Characteristics of resources, such as their value, rarity, inimitability, and non-substitutability, influence the ability of a resource to help create and sustain a competitive advantage, and highlight the importance of resource flexibility (Ahmadi & Osman, 2017).

Researchers have gone into depth about how resource characteristics develop and the affect they have on performance (e.g., Barney, 1991; Dierickx & Cool, 1989; Lippman & Rumelt, 1982). Much of this effort has assumed an economically rational portrayal. This effort has caused some researchers to view the RBV as tautological to a great degree (Priem & Butler, 2001). For example, a position may be that it is rather obvious that a competitor that possesses a valuable resource that no other competitors have, and that they cannot copy or substitute for is going to gain a sustainable competitive advantage. However, as will be described here, there are a variety of factors that can be examined that increase the usefulness of the RBV.

The external environment provides a variety of threats and opportunities for firms (Busch & Barkema, 2021). Some of these may be predictable while others are not. For example, in stable situations, firm efficiency

DOI: https://doi.org/10.11113/ijibs.v18.129

may take priority over change as firms focus on exploitation over exploration (Vorhies, Orr, & Bush, 2011). The drive for efficiency may benefit from a different set of resources than those useful for less stable situations. Resources can provide slack which may shield a firm from environmental fluctuations and provide additional avenues for growth (Bradley, Shepherd, & Wiklund, 2011)

In addition to environmental fluctuations directly driving resource utilization, internal factors such as resource enhancement or deterioration, can drive firm behavior. For example, strategic renewal can increase awareness and development of resources and be used to set a firm up to take advantage of opportunities and handle threats (Floyd & Lane, 2000).

Awareness, Motivation, Capability (AMC) Framework and Managerial Perceptions

The AMC framework proposes that firms engage in a particular action (or response) when managers are aware that action needs to be taken, they are motivated to take the action via some incentive, and their firm has the ability to carry out the action (Chen, 1996; Chen, Su, & Tsai, 2007). The central theme of the AMC arises out of expectancy theory (Vroom, 1964), although it increases the focus on awareness. The AMC framework states that all three of its elements, awareness, motivation, and capability, must be sufficiently present for an action to take place.

The theme of the AMC is consistent with subjectivist perspectives. Subjectivist perspectives note that individuals' experiences (e.g., firm-specific, team-specific, industry-specific) differ, and over time this creates variance in their perceptions, beliefs and actions (Kor et al., 2007). Thus, what is considered rational will vary among individuals, and this will result in differing firm actions. In regards to awareness in the AMC, individual and environmental factors can influence managerial perception (Kiesler & Sproull, 1982). The upper echelon perspective asserts that a firm's managers can have a significant influence on their firm (Hambrick & Mason, 1984; Thomas, Clark, & Gioia, 1993). Their thoughts and actions guide firm behavior and outcomes. One way this occurs is through managerial characteristics, which, for example, can influence firm scanning and awareness (Ocasio, 1997). Differences in managerial cognitions and behaviors can influence strategy formulation and implementation, with a subsequent effect on firm performance (Penrose, 1959).

Thus, firm aspects such as managerial perceptions must be considered for a realistic application of the RBV. One significant consideration is that the potentially tautological nature of the RBV is lessened when we realize that firm resources are not always viewed and managed in an economically rational manner by managers. Infusing the RBV with differing competitive assessments of resource characteristics creates the potential of competitors possessing valuable, rare, inimitable, and non-substitutable resources not realizing it, not utilizing the resources appropriately, and failing to achieve and sustain a competitive advantage.

Recognizing the importance of managerial perceptions of firm and competitor resources as they influence firm actions (Bloodgood et al., 2021) provides a way to explain successful and unsuccessful application of firm resources. Since perceptions drive decisions even though they are not always accurate (Chen et al., 2007), differences in firm behavior and outcomes can vary over the short and long run. Perceptions can also be long-lasting. Managers tend to use previously successful actions to problems that are proximal to current problems, so accurate perception plays an important role in beneficial action selection (Alberti, Sugden, & Tsutsui, 2012).

In addition, managers are often predisposed to certain attention routines and decision approaches that can result in interpretations that are consistently different from those of managers in competing firms (Ashmos, Duchon, & McDaniel, 1998). One way this materializes is through differing amounts of attention given to the external environment (Ashmos, Duchon, & McDaniel, 2000).

Results

Perception Accuracy and Resource Leverage

According to the RBV, a firm with superior resources will be more proficient at attacking or responding in rivalrous situations (Chen, 1996), which can create a competitive advantage (Barney, 1991; Wernerfelt, 1984).

DOI: https://doi.org/10.11113/ijibs.v18.129

This relationship is based on economically rational decision making. Resources that help create firm strengths are leveraged to enhance competitiveness and increase performance (Giarratana et al., 2021). At least three types of leveraging strategies have been identified: resource advantage strategy, market opportunity strategy, and entrepreneurial strategy (Sirmon et al., 2011). A lack of useful resources that result in a weakness are not leveraged in order to avoid non-competitive actions that could result in significant performance decline (i.e., hazard). An implicit assumption with these actions is that managers accurately perceive the status (strength or weakness) of their resources as compared to competitors. As shown in Figure 1, if managers are accurate in their perceptions of their resource strengths and weaknesses their firms will appropriately leverage their resources.

Appropriately leveraging resources helps achieve external fit (Sirmon et al., 2011). Internal and external contexts may have significant influence on particular firm resources (Fantazy, Kumar, & Kumar, 2009), such that increased resource perception accuracy can enhance leveraging choices managers make. Therefore, as shown in Figure 1:

Proposition 1: High perception accuracy of strengths and weaknesses is positively related to appropriate resource leverage.

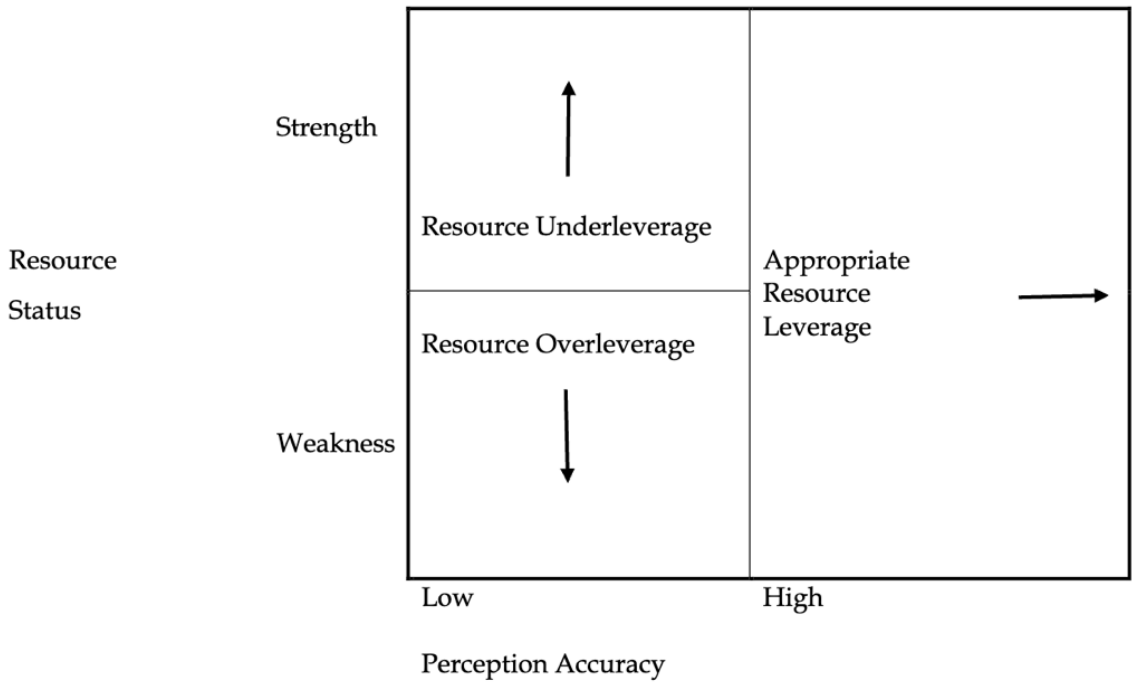


Figure 1. Resource Leverage Strategy

However, managerial perceptions of a firm's resources, rather than actual resource status and the desire to increase the utilization of firm resources, drive planned resource application (Penrose, 1958). At times, managers may inaccurately evaluate and perceive the status of their resources relative to competitors (Bloodgood & Bauerschmidt, 2002), which can interfere with economic rationality in decision making regarding resource leverage. This can result in competitors not always appearing to be rational in their behavior (Zajac & Bazerman, 1991). For instance, low financial resources may be incorrectly perceived as abundant, with a resulting firm expansion initiative failing due to lack of actual resources.

Inaccurate resource perceptions may stem from a variety of causes such as, unknown high replicability of resources (Teece, Pisano, & Shuen, 1997), unobserved individual social capital (Wezel, Cattani, & Penning, 2006), and causal ambiguity that goes unnoticed. Moreover, competitor assessment may be flawed to some extent, since competitors' resources may be more difficult to identify and fully understand (MacMillan,

DOI: https://doi.org/10.11113/ijibs.v18.129

McCaffery, & Wijk, 1985).

Furthermore, investment choices are not always clear cut for managers (Cegarro-Navarro & Dewhurst, 2007). Resource needs for initiative often vary over the course of development and implementation (Wu et al., 2008). Additionally, there are numerous factors to consider in decision making; making it rather complex (Ott & Eisenhardt, 2020). Some actors are known, while others are not. Relatedly, firms are not always cognizant of what they do not know (Bloodgood & Salisbury, 2001), so conventional assumptions of rationality in decision making are suspect. In particular, insufficient managerial understanding of a firm's interdependencies can lead to a failure to act appropriately (Clement, In-press). For this reason, flexibility of a business model enables more resource adjustment (Sinfield et al., 2012) as uncertainty decreases over time. However, some initiatives require significant commitment of resources, and are exposed to significant risk due to uncertainty.

Because of these risks, managers are likely to focus on their firm's best opportunities, which often involve utilizing strengths and avoiding weaknesses. Managers who misperceive their firms' strengths as weaknesses are more likely to avoid leveraging them in order to avoid competitive rivalry where they are likely to lose. Thus, as shown in Figure 1, perceiving a strength as a weakness will lead to underleveraging a resource. Therefore:

Proposition 2: Low perception accuracy of a strength is positively related to resource underleverage.

Similarly, as shown in Figure 1, when managers misperceive a weakness as a strength it will lead to overleveraging. As managers attempt to maintain fit with the external environment, they will attempt to utilize their perceived resources to explore and exploit as needed (Walrave, Van Oorschot, & Romme, 2011). One reason for this misperception is the tendency for firms to drift toward stability and efficiency over time (Eisenhardt, Furr, & Bingham, 2010). Since this drift is frequently mindless and automatic, it may go unnoticed by managers who fail to notice the resource is no longer as strong relative to competitors' resources. Thus, managers may perceive their firm's recent weakness as an historical continuing strength, and overutilize it. Moreover, firm resources can be tightly coupled (Foss, 1996), which can also be overlooked (King & Ziethaml, 2001). This could lead to a failure to recognize that when a single resource becomes a weakness, it could negatively affect the value of other resources and how they are used.

Proposition 3: Low perception accuracy of a weakness is positively related to resource overleverage

Realized and Unrealized Opportunities and Hazards, and Resource Adjustment

Failures of managers to appropriately identify a need for change, with the consequent failure to modify strategy is a significant source of performance decline due to external misfit (Sheppard & Chowdhury, 2005). As managerial perceptions guide the use of resources, and therefore influence firm performance outcomes, managers may, at times, fail to realize opportunities and avoid hazards associated with resource leverage (Soluk, 2022). Resources required for successfully engaging in opportunity seeking are best utilized when managers perceive them accurately. If a manager deems firm resources to be sufficient to pursue an opportunity, and is accurately perceiving the resources, there is a much higher chance for realizing the opportunity than if the resources were insufficient.

The assessment of a firm's own resources is not the only thing managers should engage in. Competitive analysis includes assessment of competitors' resources, intent, and perceptions (Capron & Chatain, 2008). The more accurate the assessment and perceptions, the more likely a firm will pursue in the opportunity, and do so in a successful manner (Tsai, Su, & Chen, 2011). Thus, perceptions of a firm's and its competitors' resources influence the competitive analysis that is used to determine the viability of competitive actions, such as opportunity pursuance (Staw, 1991). Therefore, as shown in Figure 2:

Proposition 4a: High perception accuracy of a strength is positively related to realized opportunity

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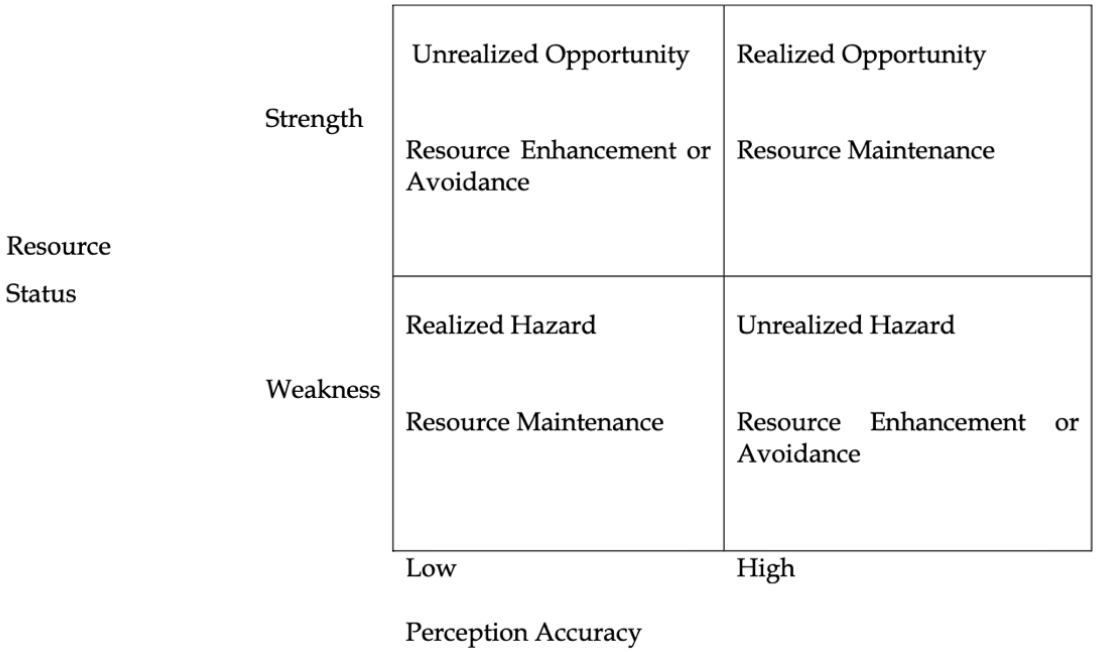


Figure 2. Resource Perception Accuracy Effects

A firm's resources may change over time in substance as well as strength relative to competitors (Sune & Gibb, 2015). These changes may decrease understanding of these resources by managers and competitors. Two ways this can happen is through what King and Ziethaml (2001) refer to as characteristic and linkage ambiguity; two important factors in determining how easily a competitor can understand and copy a firm's resources and capabilities. Characteristic ambiguity is a lack of clarity about the resource, while linkage ambiguity refers to the lack of clarity of the role of the resource in firm performance. Both formal and informal firm actions influence resources and their causal ambiguity.

Over time, managers make changes to resources to improve external and internal fit (Soluk at al., 2021). Resource adjustment includes the degree to which resources are maintained, enhanced, and circumvented. The extent to which managers want to maintain or enhance a particular resource depends on how they perceive the resource as a strength or weakness. Resources that are considered as important strengths, and get used would likely be maintained to ensure their usefulness and viability (Lillrank, 2003). Keeping a strength from dissipating is important for maintain any competitive advantage the strength provides.

When firms perform well they tend to act more conservatively and pursue the status quo in order to preserve their advantage (Chen et al., 2010). It is important, therefore, to maintain the resources associated with strengths in order to sustain competitiveness (Le Mens et al., 2011). This can be done, to some extent, through continued use of the resources (Ross et al., in press). More conscious efforts, such as formal human resource systems (Lin, Li, & Lam, 2020), can also be used to sustain a strength. Therefore, as shown in Figure 2:

Proposition 4b: High perception accuracy of a strength is positively related to resource maintenance

A variety of opportunities exist for firms, but a number of them are not sought (Chattopadhyay, Glick, & Huber, 2001). Managers who incorrectly perceive their firm's ability to capitalize on an opportunity and instead view an inferior resource base in their firm, are likely to avoid the opportunity if it involves potential hazards. There are a variety of potential antecedents to misperception of resources. For instance, decision-making routines can bias perceptions of resources and capabilities (Cohen, March, & Olsen, 1972). In addition, knowledge resources are not entirely known by any single individual in the firm (Weick & Roberts, 1993). Thus, perceptions about resource strength and weakness can be formed in a very subjective manner that can divert from reality.

DOI: https://doi.org/10.11113/ijibs.v18.129

Although firms can, at times, alternate between inertia and adaptation (Gersick, 1994), a perceived lack of resources will be less likely to trigger a competitive action (George, 2005). Resources must be employed, not just possessed or controlled to realize their full benefits (Barney, 1991). Thus, when strengths are perceived as weaknesses they are less likely to be leveraged to the appropriate extent. Therefore, as shown in Figure 2:

Proposition 5a: Low perception accuracy of a strength is positively related to unrealized opportunity

When opportunities are bypassed because of a perceived weakness, managers may try to rectify the weakness by enhancing firm resources over time or they may simply avoid employing the (weak) resource base. Managers will expand their search for new approaches when they are not satisfied with existing solutions (Leonard-Barton, 1995). In the context of firm resources and competitiveness, this means that strengths perceived as weaknesses will be circumvented to avoid non-competitive interactions or enhanced in hopes of generating a strength. For example, firms can build human capital-based resources through firm-specific incentives (Kryscynski, Coff, & Campbell, 2021). In addition to the numerous causes of misperception mentioned earlier, changes in firm membership can create ambiguity around resources. For example, key firm activities can be disrupted by turnover in self-managing teams (Van Der Vegt, Bunderson, & Kuipers, 2010), potentially causing distractions concerning the status of a strength. This can then lead to perceptions of weakness rather that strength, with a subsequent effort to unnecessarily bolster the strength or avoid its use.

To operate with the presence of perceived weaknesses, firms may try to focus on the utilization of other strengths and avoid the application of weaknesses (Porter, 1985). Thus, weakness avoidance becomes part of the firm's strategy. In some cases, firms may want to remedy the perceived weakness by making it stronger. In particular, the firm will likely pursue strengthening weaknesses that are important for existing and future environments. For example, resources, such as advanced knowledge, are most likely to be pursued when the need for them becomes clear (Radecki & Jaccard, 1995). A stream of investments into creating a strength form a weakness can be long and ambiguous. Investments are path dependent and sometimes complex, so outcomes will vary (Eggers, 2012).

Absorptive capacity can also play a role in the success of resource enhancement. Insufficient existing resources can thwart a firm's ability to change (Carreira & Silva, 2010). If a firm is effective at initiating the early stages of resource enhancement, early moves can certainly lead to first mover advantages (Moorthy, 1988). However, it is important for firms to create imitative barriers when building new resources (Yoo & Choi, 2005) in order to sustain any advantage that arises. Therefore, as shown in Figure 2:

Proposition 5b: Low perception accuracy of a strength is positively related to resource enhancement or circumvention (sidestep, bypass, avoid)

Initiating competitive actions is risky, especially when a firm does not have a clear advantage over its competitors (Porter, 1985). Inadequate financial, human, and knowledge resources can lead to unsuccessful attempts at trying to outcompete a stronger competitor. For instance, making a market share play by outspending competitors on innovation and marketing will likely not work if a competitor has more resources at its disposal. These types of competitive actions can lead to financial impairment with no gain in market share. Hazards like these are not uncommon for those firms overextending their resources.

When rational firms accurately perceive themselves to have a weakness, they are more likely to avoid initiating actions that rely on those relatively limited resources in order to avoid potential hazards (Kirzner, 1979). This is not to say firms have no way of competing unless they have a resource advantage. It just means that they should tend to focus on strategic initiatives that avoid their weakness. Some weaknesses, such as financial limitations, can be overcome by engaging in imitation rather than innovation (Boulding & Christen, 2008) in order to reduce expenses. One example is the avoidance of some pioneering costs that come with innovation. Therefore, as shown in Figure 2:

Proposition 6a: High perception accuracy of a weakness is positively related to unrealized hazard

DOI: https://doi.org/10.11113/ijibs.v18.129

For reasons similar to those mentioned in Proposition 5b, the application of a perceived weakness is often minimized for competitive reasons (Porter, 1985). In addition to circumventing a weakness, a firm may try to turn the weakness into a strength over time. When the need arises, additional resources and capabilities can be developed through strategic renewal processes (Floyd & Lane, 2000). These efforts can take time, of course (Lockett et al., 2011). However, with deliberate effort change can be accelerated (Eisenhardt & Tabrizi, 1995).

Investments in resources (e.g., weaknesses transitioning to strengths) provide future options for a firm (Sandri et al., 2010). Pioneering, though risky, may create additional competitive advantages for a firm especially during periods of environmental change (Zahra, Nash, & Bickford, 1995). Thus, using resources in new ways can enhance them and improve firm performance (Morrow et al., 2007).

Some types of resource improvements could include increasing the flexibility of initially weaker resources in order to expand their flexibility. As such, resource fungibility may provide important options for a firm (Sapienza et al., 2006). Care should be taken in determining which weaknesses to improve upon, especially under uncertain future conditions. It should be kept in mind that efforts to continually improve resources may not always be successful, but could lead to dynamic strengths (Anand et al., 2009). Therefore, as shown in Figure 2:

Proposition 6b: High perception accuracy of a weakness is positively related to resource enhancement or circumvention (sidestep, bypass, avoid)

Rationally, firms will utilize their strengths to initiate or respond to competitive actions Porter, 1985). This can be necessary to achieve or sustain a competitive advantage (Barney, 1991). For example, a firm may direct its product engineers to develop a new product line to attack or respond to competitors. However, if the firm is weaker in its engineering resources, unfortunate outcomes can often occur. This is particularly true when managers perceive the weakness to be a strength, and hope to lead or dominate a competitive interaction. As mentioned previously, misperceptions can occur for a variety of reasons. For example, due to some type of halo effect, possessing strengths may lead to perceptions of other abilities that may not be present to the same degree. Thus, some strengths may be perceived when they have never existed.

Older strengths can also create perception difficulties. For example, a well-adapted (externally fit) strength at one time may actually make other types of strategic actions more hazardous because of the unforeseen inability to productively change over time (Barnett & Pontikes, 2008) when the environment changes. In addition, some strengths can weaken over time. For example, the competitive advantages resulting from some routines can deteriorate when key members of the routine are lost (Aime et al., 2010). As these types of problems with strengths occur, inaccurate perceptions can form that can cause an overleveraging of a weak resource. This overleveraging can increase the noncompetitive actions a firm takes, thus exposing it to competitive hazards. Therefore, as shown in Figure 2:

Proposition 7a: Low perception accuracy of a weakness is positively related to realized hazard

Perceived access to strong resources motivates managers to experiment by deploying them and taking risks (George, 2005; Penrose, 1958). Managers are also motivated to maintain these strengths in order to sustain an advantage. However, misperceptions of weaknesses seen as strengths also motivate managers to only maintain the (weak) resources. Thus, instead of enhancing the (weak) resource, managers assume its strength merely requires maintenance from an efficiently standpoint.

Weakness that is inaccurately perceived as a strength may result in an emphasis on resource maintenance rather than enhancement, but either should be performed in an efficient manner to achieve the most beneficial results (Starr & MacMillan, 1990). With efficiency being a rational characteristic of firms, avoiding excess expense is important. Therefore, as shown in Figure 2:

Proposition 7b: Low perception accuracy of a weakness is positively related to resource maintenance

DOI: https://doi.org/10.11113/ijibs.v18.129

Performance Implications of Perception Accuracy and Resource Status

It is no surprise that firms with strengths fare better than firms with weaknesses. It is also apparent that managers with accurate perceptions of their firm's resource status are likely to more judiciously apply their resources, thus enhancing firm performance. Together, these two characteristics create a clear projection of firm performance. As show in Figure 3, the degree of resource strength and the accuracy of resource perception combine to influence firm performance.

Much of the effect of firm performance is based on resource leverage (Giarratana et al., 2021). Too much or too little strategic change can be detrimental to performance (Zhang & Rajagopalan, 2010. In addition, complexity and unforeseen interactions of resources can influence outcomes (Ho, Fang, & Lin, 2011). These affect managerial perception of resource strength. Moreover, being different from competitors is generally required to gain a competitive advantage, but the difference must also be valuable in the competitive context (Barney, 1991). The firms best equipped to take advantage of particular environmental changes will vary depending on how well their perceived and actual resources match the environment (Sorescu, Chandy, & Prabhu, 2003).

In addition, managers should watch out for too much simultaneous change (Stensaker et al., 2002). For example, recently automotive manufacturers have been attempting to transition their fleets from internal combustion engines to electric-powered. Several other power variations are also being designed and employed, such as hybrid and hydrogen power. These concurrent efforts, along with changes away from passenger cars and toward sport utility vehicles (SUVs) could be spreading managerial and design resources too thin.

Strengths, such as valuable knowledge resources, and processes related to their use, influence firm performance (Wiklund & Shepherd, 1995). And, as discussed above, perceptions and resource leverage influence competitiveness. Therefore, as shown in Figure 3:

Proposition 8: Combinations of high perception accuracy and strengths result in higher performance than combinations of low perception accuracy and weaknesses.

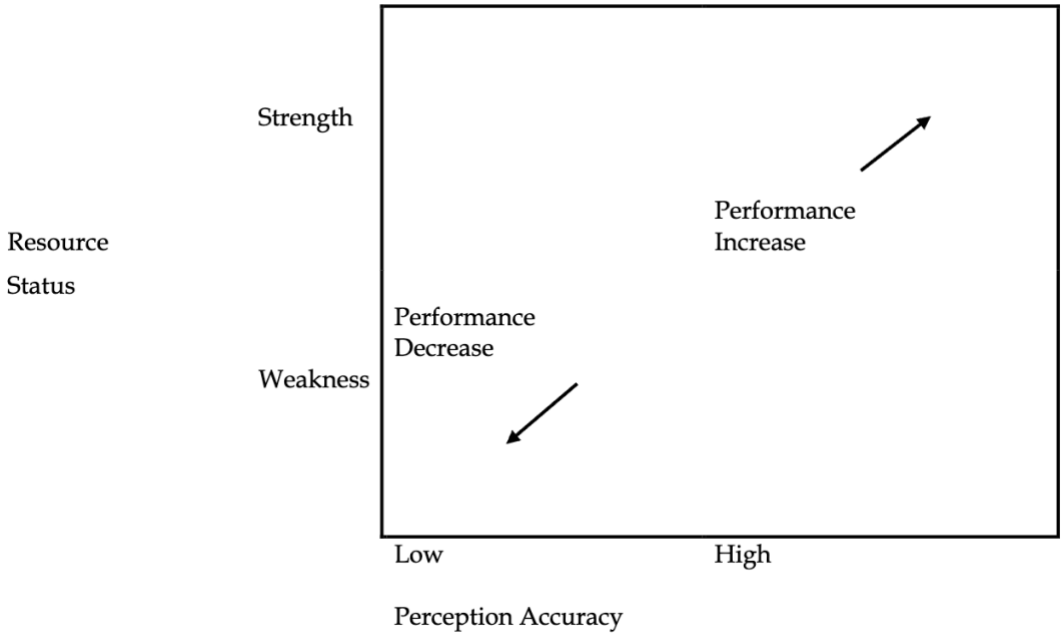


Figure 3. Resource Leverage Performance Implications

DOI: https://doi.org/10.11113/ijibs.v18.129

Discussion

This research investigated the likely outcomes concerning resource status and managerial perception accuracy. In particular, it examined the influence of resource status and perception accuracy on resource leverage, opportunity and hazard realization, and firm performance. By integrating the RBV and AMC frameworks, we can better understand the important role that managerial perception plays in firm's competitive actions and outcomes.

When firms leverage their resources it is usually to provide some type of benefit to the firm (Giarratana at al., 2021; Porter, 1985). This, of course, is more likely to be the case when a resource is a strength rather than a weakness. Firms also withhold leveraging resources that are deemed to be a weakness in order to avoid competitive hazards. Unfortunately for some firms, managerial perceptions are not always accurate. Strengths may be misperceived as weaknesses, and weaknesses misperceived as strengths. The result from these misperceptions includes unrealized opportunities and realized hazards. The performance implications from this can be significant.

This investigation provides several implications for researchers. For RBV and other economics-based research, it is indicated that managerial perception potentially has a large impact on firm behavior and performance that it needs to be better integrated into these theories. For instance, some have said that the RBV can be viewed as tautological based on a firm possessing more valuable and rare resources gaining a competitive advantage. The inclusion of perception creates variance in the relationship between valuable and rare resource possession, usage and competitive advantage. In addition, a firm's resource utilization can also be affected by the entrepreneurial characteristics of its managers. More entrepreneurial managers may be inclined to view a lower level of resources to be adequate for competitive initiatives than less managerial managers (Stevenson & Jarillo, 1990). Thus, this and related theories can be augmented or strengthened by a focus on perception and risk-taking propensity. Of course, managerial perception, and perhaps risk-taking, could be viewed as strengths (Mahoney, 1995), which could potentially be absorbed by the RBV.

Another implication of this research is the effect it may have on external fit research. Seeking external fit is important (Fortwengel, 2017), however dynamic competition creates a moving target. The pace of environmental dynamism will affect the benefits of resource investment (Perez-Freiji & Enkel, 2007). The behaviors of the best-performing firms under environmental change might be viewed as appropriate, given the high performance that accrues. However, the inclusion of perception differences creates at least two issues to explore. First, misperception may be occurring such that firms' pools of resources may not necessarily be the most useful for competitiveness under a changing environment. Perhaps the risks of underleveraging and overleveraging are so high and costly that possessing fewer, older resources leads to better performance because they are more accurately perceived and leveraged. Second, much of strategy and competitiveness research is subject to a focal firm, and its competitors', behaviors. The inclusion of the likelihood for competitor misperception creates a variety of possibilities to explore. For example, the degree to which a focal firm can count on its competitors' resource perception accuracy could determine the most appropriate firm leveraging. Judo strategy, for instance, maintains the importance for small firms to stay under the radar of larger competitors in order to avoid their competitive attacks (Yoffie & Kwak, 2002).

Finally, an opportunity for future research is to examine the inclusion of second order competences (Danneels, 2008). In the context of this study, some types of resources and capabilities could be used to create or improve existing resources when the need is perceived. The inclusion of second-order competences would likely add some complexity to the logic portrayed here, but would appear to maintain the proposed relationships in a consistent manner. In addition, there may be general implementation competences (Kuntz & Gomes, 2012), based on certain resources, that could also influence some of the proposed linkages. However, these also would seem to act in a similar manner.

One of the most important practical outcomes of this research is the recognition that managers should pay significant attention to the importance of resource perception. Successful resource leverage decisions depend on accurate perceptions of a firm's and its competitors' resources. Objectively-driven data about firms is becoming increasingly available (e.g., Chou, Hung, & Lu, 2022). This data can be used to guide managerial

DOI: https://doi.org/10.11113/ijibs.v18.129

perceptions. Because managerial perception of resources is vital, managers should examine the factors that affect perception (e.g., work experiences). A myriad of potential biases exist in individuals that could influence the perceived value of a resource. For example, the functional background of a managers can influence initiative evaluation and decision making (Pettigrew, 1992), and risk-taking may influence resource building (Khattak & Ullah, 2021). In addition, biases such as prior hypothesis bias, representativeness bias, and availability error can all contribute to invalid beliefs about firm resources and their usefulness (Schwenk, 1984).

Misperception, especially over time may cause additional issues for firms. For example, mixing resource strategies can be risky and lead to underperformance (Ebben & Johnson, 2005). This can occur when managers correctly perceive a resource as a strength or a weakness and then later perceive it to be the opposite. Resource leverage may fluctuate because of this and result in inefficiencies in addition to unrealized opportunities and realized hazards.

For managers, it is also important to keep in mind that short-run and long-run performance may differ with various resource leveraging, maintenance, and improvement efforts (Itami & Nishino, 2010). For example, time consuming resource-building efforts may be costly in the short run but provide competitive advantages that are sustainable for lengthy periods. Thus, a forward-looking time horizon may be beneficial for identifying the most appropriate resource leveraging strategies in many contexts. Managers should also be cognizant of the tendency to focus on internal domains that they have more control over as compared to external domains (Tushman & Romanelli, 1985). This can influence where resources are applied by managers, due to their familiarity with working in them.

Conclusion

Although resource status and perception accuracy were examined here to evaluate how managerial perception might influence resource leverage and firm performance, other factors were not included. Individual managerial factors, such as risk-taking propensity (Heavey et al., 2009) and CEO origin (Zhang & Rajagopalan, 2010), could play a sizable role in resource leveraging, and should certainly be looked at by researchers. Firm-level factors, such as power distribution and entrepreneurial orientation (Wiklund & Shepherd, 2003), may interfere with planned resource enhancement and application (Valorinta, Schilt, & Lamberg, 2011). These too should be examined in order to determine how firm-level factors influence the proposed relationships and the degree to which they do so. Finally, industry-level factors, such as network characteristics (Bloodgood, 2022), should also be considered in future research efforts. For example, in some situations, such as the presence of network externalities and a competitively superior product, firms can benefit from imitation by competitors (Conner, 1995). Alternatively, firms can be harmed in closed network situations, by, for example, knowledge leakage to competitors (Bloodgood & Chen, 2022).

In conclusion, just as competitive dynamics merges the RBV with strategy (Chen & Miller, 2012), additional perspectives need to be examined for their usefulness with these important theories and frameworks. Here, aspects of the AMC framework were integrated as well. Specifically, managerial perception was described as being an important factor in firm resource decisions and outcomes. The dynamic nature of rivalry leads to changes in the competitive environment, which influences future rivalrous behavior (Barnett & Hansen, 1996; Chen & Miller, 2012). Managerial perceptions act as a bridge between environmental change and firm behavior.

Acknowledgement

The author would like to thank all individuals and organizations who contributed to and supported the completion of this study. The author also appreciates the valuable assistance and support received throughout the research process.

Conflict of interest

The author declares that there is no conflict of interest regarding the publication of this article.

Data availability

DOI: https://doi.org/10.11113/ijibs.v18.129

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Ethics declaration

This study used publicly available secondary data and did not involve direct interaction with human participants. Therefore, ethical approval was not applicable.

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