

## RESEARCH NOTES AND COMMENTARIES

### MORE THINKING ON RESEARCH METHODS FOR THE RESOURCE-BASED PERSPECTIVE

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*We re-examine the benefits of using a broader set of research methods to address key questions associated with the resource-based view (RBV) of the firm. In responding to Levitas and Chi, we consider how research inside organizations can complement and augment research relying on secondary data. Copyright © 2002 John Wiley & Sons, Ltd.*

In the short time since our research note (Rouse and Daellenbach, 1999) was published, interest in the resource-based view of the firm has continued to increase dramatically, with over 100 articles published relating to this perspective in each year. While most of these are empirical studies, a number of articles have begun to debate the theoretical underpinnings of the RBV, as well as its usefulness for strategic management research (see, for example, Priem and Butler, 2001a, 2001b; Barney, 2001; Powell, 2001). In responding to Levitas and Chi, we welcome the opportunity to clarify further why a broader set of research methods will be useful in advancing our understanding of the resource-based view.

In their critique and defense of coarse-grained methods, Levitas and Chi raise three, what they term, major shortcomings of our methodology. We would note, though, that in our original work we made no call for the abandonment of large-sample

or secondary data examinations—and never intended such a call. In fact, the first step of our methodology relies heavily on secondary data for the identification of distinctive performance. Similarly, our critique of large-sample studies points to the need to contrast systematically high performers with other firms following similar strategies with less success so that the research most clearly distinguishes those firms with the potential for resource-based competitive advantage(s) from those without such potential. Average performance, which characterizes a significant proportion of large samples, could be indicative of the absence of both competitive advantages *and* disadvantages or the presence of both competitive advantages *and* offsetting disadvantages (Powell, 2001). It seems important to be able to disentangle these possibilities. Furthermore, in responding to Levitas and Chi, we would like to illustrate how our proposed methods could be as useful (and sometimes more so) in overcoming the ‘shortcomings’ that Levitas and Chi claim coarse-grained studies can address.

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## KNOW-WHAT VS. KNOW-HOW

Levitas and Chi's first shortcoming states that we have confused the important distinction between knowing-how and knowing-what. However, this distinction is at the heart of our call for research *in* organizations to complement research *on* organizations. Levitas and Chi argue that large sample studies using publicly accessible data can indicate the presence and strength of some valuable resource without necessarily allowing competitive imitation. We agree—specifically because such secondary data leave the resource in question (and its accumulation processes) causally ambiguous and, at best, imprecisely identified. Using Levitas and Chi's examples, while patents granted relative to research intensity could be used as a proxy for relative R&D competence, without research inside these firms, it is still impossible to determine what allowed one firm's R&D efforts to be more effective than another firm's. Conner (1991: 145) notes this difficulty with empirical proxies in the following related example:

... it might be tempting, considering data problems, to use 'number of new products launched' as a proxy for a firm's resources related to R&D capabilities. It is clear, however, that (a) firms measuring identically on launches may have entirely different components of R&D capability, or (b) instead of reflecting R&D capability, launches may indicate management proclivities regarding when a product is deemed ready for market or plain luck in development time.

To untangle the nature and sources of such competencies requires going inside the black box of organizations; thus, requiring other methods that can be used in conjunction with traditional secondary data analyses that are well established in strategic management research.

Levitas and Chi continue (in footnote 3 and the preceding discussion) by stating that we imply tacitness is rapidly dissipated by public disclosure and that publicly disclosed data could not form the basis of a sustainable competitive advantage. We argued, however, that when sources of sustained competitive advantage remain tacit, this precludes their public disclosure via secondary data. As noted above and recognized by Levitas and Chi (p. 959), 'patterns of distinction in performing certain tasks can *indicate* a firm's possession of valuable

and relatively unique resources/capabilities but *do not reveal* the key to imitating unique strategies' (emphasis added). Moreover, there is advantage for the 'outsider' doing research inside organizations when addressing tacitness, which has been demonstrated in anthropological studies of culture in organizations (e.g., Rouse and Fleising, 1995). The outsider does see in cultures that which insiders have so taken for granted that they cannot discover it for themselves. This outsider advantage does not necessarily mean that it is not feasible for an insider with training to discover and articulate the same insights—it is just difficult and uncommon. Moreover, research *in* organizations has a distinct advantage over research *on* organizations, precisely because it has access to a broader set of data.

Levitas and Chi also use Peteraf's (1993) argument that a Nobel prize-winning scientist, for example, could not constitute a capability generating competitive advantage because of capability transfer ease. If such capabilities reside in an individual/group, that individual/group could exit the firm, becoming a competitor or command higher wages through exit threat. This example serves to point up yet another reason for more in-depth methods: the interconnectedness of asset stocks (Dierickx and Cool, 1989). If RBV research suggests that a knowledge/expertise resource such as a Nobel prize-winning scientist is the source of an organization's advantage, then this might require a firm to organize itself and its complementary resources in order to protect the value created by this rare and inimitable asset. In an international software systems integration firm with whom one of us did some work recently, it became evident that high-quality staff attraction and retention were their core sources of advantage. In order to enhance and protect those resources, network-based recruitment and clan control were implemented. The possible threat of higher than industry-level wage demands was offset with other value-added elements such as culture, climate, self-actualization, social networks, social interaction/recreation, and stock ownership. In other words, in situations where a firm's core competency 'has feet' and can 'walk away', the threat of exit can be offset. Thus, in addition to the advantage resident in high-quality staff (e.g., a Nobel scientist), there would need to be an organizational capability in protecting and enhancing

such core resources. Traditional research methods might begin to uncover this capability by identifying high staff retention rates. Similarly, if staff retention rates within or across industries were available, these could be correlated with performance, adding some additional evidence of the existence of a valuable capability. Fieldwork-based research, however, could uncover precisely *how* as well as *what* was done. Large sample studies relying on secondary data on their own do not have that potential.

This would not mean that describing a competence would allow another firm to duplicate exactly what was being done. In a very real sense such knowledge-in-action resources and other dynamic capabilities (Teece, Pisano, and Shuen, 1997; Metcalfe, 1998) ensure that firms are heterogeneous (an assumption of RBV dating back to Penrose, 1959). Understanding sources of advantage in these contexts increases our comprehension so that, in a practical sense, similar kinds of advantage might be generated by firms in similar situations, that is, equifinality rather than duplication.

Levitas and Chi conclude their consideration of know-what vs. know-how with an interesting paradox relating causal ambiguity, reliable isolation, full comprehension, and sustainability. While full comprehension is probably at best an ideal for which one should strive, it is unlikely that full comprehension is possible in most situations. Causal ambiguity may well be a factor in this. It is, though, only one potential barrier to imitation and erosion of sustainable advantages. Thus, developing a better understanding through intraorganizational research does not present such a difficult conundrum and serves well to clarify the unobservables behind observable outcomes.

## THE ROLE OF OBSERVABLES

Levitas and Chi's second critique hinges on the characterization of our proposed methodology as a single case study similar to Penrose and, as a result, relegating it to 'a *first step* toward understanding sustainable advantages' (Penrose, 1960: 3). Our argument, though, focuses on the RBV's predictions that the deployment of unique and idiosyncratic organizational resources and capabilities can result in sustained superior performance. Since, by definition, only some firms will

have sustained superior performance, this suggests that the 'reality observed *for populations of firms*' (Godfrey and Hill, 1995: 530, emphasis in the original) may be an inappropriate sample to test the outcomes predicted by the RBV. Moreover, the final step in our sample selection process explicitly calls for a 'comparison of differences between high and low performers' (Rouse and Daellenbach, 1999: 489). Such comparisons between performance-differentiated firms provide a basis for the assessment of both value and uniqueness of resources, as Levitas and Chi note is desirable, and would avoid many risks of isolating competitively inferior resources.

These comparisons would also help to clarify whether resources have been identified too broadly by the proxy measures developed in secondary data research. For example, Makadok and Walker (2000) in their research on money market mutual funds use differences in a fund's interest rate forecasting ability as an indicator of each firm's forecasting competence. However, based on their secondary data alone, we do not know the extent to which forecasting ability is primarily associated with an individual or team-based competence or due to other resources such as the knowledge and information networks to which the firm has access or the way information is shared and communicated. While their telephone interviews provide more conclusive evidence for the existence of an organizational capability, questions remain as to whether differences in forecasting ability are due to different levels of the same capability(ies) or different types of capabilities across firms. Some intrusive research would be needed to enhance our understanding of both the generalizability and managerial implications of their results.

Later, Levitas and Chi (pp. 960) state that the predictions of the RBV have been verified without operationalizing all of its key theoretical constructs. We agree. Theoretically and empirically, we have some understanding of the *what* in many cases but now need to extend our methodology so that we can know *how* as well. This does not mean that all of the key theoretical constructs need to be operationalized. Further, it is the verification of the predictions of the model that suggests that research drawing on our methods within the framework of the RBV would be useful for gaining a deeper understanding of *why some firms are successful within a population and others are not*. We feel

that answering this core question that drives strategic management research can best be achieved by combining research inside organizations with secondary industry or group-level data.

Levitas and Chi suggest that validity may be sacrificed for richness through our method. There are several kinds of validity: construct, descriptive, interpretive, theoretical, and generalizable validity. Our method does well on the first four of these. In terms of generalizability, it is, to restate the point, questionable whether sustainable competitive advantage based on unique resources can be generalizable at all. What is perhaps more important is that our method seeks to provide explanation through understanding of competitive advantages in a particular context which also suggests a degree of utility in assessing similar phenomena in similar contexts (Yin, 1984). Related to the previous point, Hatten and Hatten (1987) note that, for the strategist, it is not generalizable similarity that is critical, but difference. It is precisely this paradox of attempts to try to generalize about uniqueness that Conner (1991) called on the resource-based view to address. Again, this may mean that we have to adapt our methods in an attempt to get at those resources that are unobservable from secondary sources.

## SAMPLING ON THE DEPENDENT VARIABLE

The RBV is an inside-out perspective on organizations that seeks to identify the characteristics of firms with superior performance. Unlike outside-in approaches which begin with the external environment explanations of sustained superior performance, the RBV posits that we look inside organizations and more explicitly holds a place for managers and what they do as important to organizational outcomes. It is high-performing organizations that should be the focus of such research and, as a result, performance should feature as a selection variable. The framework is essentially one that privileges:

- (a) *resources* (tangible and intangible) which are bundled, linked, incorporated, converted and *organized* into
- (b) *sociotechnical processes* (knowledge, routines, structures of relationships, cultures, etc.) some

of which are *rare, inimitable* (or costly to duplicate), and *non-substitutable* that form

- (c) *capabilities* and *core competencies*. These then become sources of *competitive advantage* which when leveraged into products and services generate
- (d) *value* and *competitive advantage* which are indicated by their *performance* consequences.

The route for researchers to get at the elements of interest is by following the value generation trail backwards to its source. Unpack the process. Begin with performance, then look for sources of advantage in the form of capabilities and competencies that meet the VRIO criteria (Barney, 1997) in order to uncover resources behind the proxies available to outsiders through secondary sources. Unless the sources of firm-specific superiority can be understood, the nature of the competitive advantage is doomed to remain largely a mystery. We will have merely substituted the black box of competencies for the black box of organizations (Scarborough, 1998).

Levitas and Chi (p. 961) perceive that these selection criteria in our proposed methodology bias them to infer that some competencies produce above-average performance when they are 'merely necessary for earning normal returns.' While we focused our discussion on high to low comparisons, similar in-depth comparisons to average performers would also be useful. In these cases, though, it becomes critical that a broad set of data is available as the average-performing firms may have lower performance due to both lower levels of key sources that generate competitive advantage as well as the presence of sources of competitive disadvantage. This 'missing variable' problem will be difficult for all pure methods to overcome, as traditional methods using secondary data will be unable *a priori* to operationalize the multiple sources of advantage and disadvantage for all firms in an industry or group, while research inside organizations may not be able to study all relevant firms so as to conclusively assess which resources are truly unique across the relevant population.

In summary, the logic of the resource-based view suggests that uniqueness springing from intangible resources (perhaps especially forms of knowledge) should form the focus of research. Thus, generalizable codifiable knowledge available from secondary sources is probably irrelevant (Penrose, 1959) to the core research agenda

of the resource-based view. The point we have attempted to make here, and in our research note (Rouse and Daellenbach, 1999), is that extending and combining strategic management methodologies could make a positive contribution to understanding competitive advantage from the resource-based view.

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