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A Review of Approaches of Resource-based Empirical Research in Banking

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Abstract: This research reviews the approaches employed in banking empirical studies that use the resource-based view as a core theoretical anchor to relate bank resources to performance outcomes. The review dwelt on measurement issues and strategies for controlling confounding factors. Six approaches of measuring bank resources are identified as: indirect assessment through the use of observable attributes, direct assessment through output counts, direct assessment by top managers, direct assessment by customers, direct assessment by experts and indirect assessment through inductive case studies. Three approaches to measuring bank performance are identified as: the use of only financial measures, the use of only nonfinancial measures and the use of a mix of financial and nonfinancial measures. Overall, approaches that relate bank resources, strategy and performance have great potential to advance the resource-based view theory from being a mere theoretical framework to being a practical framework for practicing managers in banking firms.

Key words: Resource-based view, empirical research in banking, banking resources

INTRODUCTION

Since, Rumelt (1991)'s article, How much does industry matter? was published, there is a growing consensus in the strategic management literature that firm-specific factors are more responsible for inter-firm performance differences than structural factors. In the banking literature, it has been validated that bank-level factors are more important than structural factors in explaining performance differences between banks (Evanoff and Fortier, 1988; Papadopoulos, 2004; Yildirim and Philippatos, 2007; Kosmidou, 2008). Following the firm-level trend in the literature, the Resource-Based View (RBV) possesses great potential to guide studies on the antecedents of banking firm performance variations.

The roots of the RBV theory trace back to the work of Penrose (1959), The Theory of the Growth of the Firm. She conceptualized the firm as being more than an administrative unit; it is also a collection of productive resources the disposal of which between different uses and over time is determined by administrative decisions. The RBV has, as its central focus, the exploitation of the firm's superior resources in order to gain sustainable competitive advantage that affords the accrual of superior performance (Barney, 1991; Peteraf, 1993; Wernerfelt, 1984).

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The RBV seeks to explain a firm's sustainable competitive advantage and performance as proceeding from the possession and subsequent deployment of resources that are valuable, rare, inimitable and nonsubstitutable (Barney, 1991; Grant, 1991; Peteraf, 1993; Wernerfelt, 1984). Resources are valuable when they enable a firm to conceive and implement strategies that improve its market efficiency and effectiveness (Barney, 1991; Liu *et al.*, 2009a). Rare and difficult to imitate or substitute resources make it difficult for potential rivals to replicate the resource position of the firm, enabling resource and therefore performance differences to persist over time (Rumelt, 1991). Resources are judged to be superior relative to those of competitors if they provide advantage by lowering a firm's cost structure and/or if they increase the value that the firm's products provide to customers (Hill and Deeds, 1996; Peteraf, 1993).

Since its introduction in the strategic management literature, the focus of the RBV has been the identification of the characteristics that resources must have to yield sustainable competitive advantage (Sheehan and Foss, 2007). To date, the RBV has been studied extensively and several empirical researches covering various industries have been carried out (Armstrong and Shimizu, 2007).

The literature indicates that the characteristics of banking business make competitive moves easy to replicate and sustainability of competitive advantages difficult to achieve (Bhide, 1986; Zuniga-Vicente *et al.*, 2004). However, to date, no review has been carried out to capture the insights of the RBV empirical researches in the banking industry. The current study, aims to review the approaches used in banking empirical studies that use the RBV as a core theoretical anchor to relate bank resources to performance outcomes in banking, it then suggests improvements to make RBV empirical studies in banking more useful for advancement of the RBV theory and more applicable for practicing managers in banking industry.

THE RBV AND COMPETITIVE ADVANTAGE OF THE FIRM

The RBV views the firm as composed of tangible resources (people, plant, equipment, etc.) and intangible resources (skills, reputation, intellectual property, etc.). The two typologies of resource respectively constitute the hardware and software that define the firm's conduct and performance. The RBV implies that, heterogeneity in the level of either tangible or intangible resources between firms will result into different levels of performance. Thus, holding tangible resources constant, performance differences between firms arise because some firms have superior intangible resources; similarly, holding intangible resources constant, performance differences arise because some firms have superior tangible resources (Hill and Deeds, 1996).

Since, firms can easily acquire most tangible resources from the resource market, firms lacking valuable tangible resources can successfully replicate successful firms' tangible resources position (Liu *et al.*, 2007). However, due to path-dependency and nontradability nature of most intangible resources (Dierickx and Cool, 1989; Caves, 1980; Helfat and Peteraf, 2003), firms cannot easily replicate other firms' intangible resources. Nonreplicability of intangible resources allows for heterogeneity of resources among firms to persist over a long time (Barney, 1991). Therefore, the existence of intangible resources is a sufficient and necessary condition to explain persistent differences in the performance of firms (Hill and Deeds, 1996). Itami and Roehl (1987) emphasize that, although tangible assets such as financial capital, equipments and buildings are necessary for operations of the firm, intangible assets such as organisational culture, human capital knowledge, reputation and management skills are the real sources of competitive advantage.

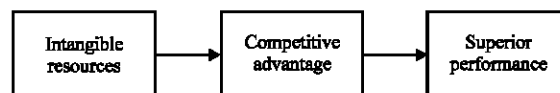


Fig. 1: The RBV conceptualization of the determinants of firm performance

Consequently, the RBV conceptualization of the antecedents of firm performance is seen as dependent on competitive advantage which in turn is defined by the quality of a firm's intangible resources. The attainment of competitive advantage by a firm is expected to lead to superior performance measured in conventional terms such as market-share and profitability (Bharadwaj *et al.*, 1993). The hypothesized relationship between a firm's intangible resources, competitive advantage and superior performance is depicted in Fig. 1.

THE LINK BETWEEN RESOURCES AND PERFORMANCE IN BANKING

The banking industry has been characterized as an industry that is transforming itself in unpredictable ways (Crane and Bodie, 1996) and an industry in which competitive advantage is difficult to achieve (Bhide, 1986). In order to build and maintain long-term competitive health in the banking industry, Mehra (1995) recommends the need for banks to develop resource-based strategic focus as a basis of competitive strategy. This section reviews the RBV research conducted to date within the banking industry with the aim to identify the main approaches of measuring banking firm resources and performance outcomes.

The link between banking intangible resources and bank performance has been investigated by a number of researchers since the RBV started to appear in banking research in mid-90s, with results generally suggesting the existence of positive relationship between bank intangible resources and superior performance. The current study reviews the methodological approaches used in these studies. The review covers studies that include the phrases "resource-based" and "banking" in the title, abstract, or listing of keywords. Using this approach, the current study identified 15 empirical RBV studies that appeared in the strategic management literature between 1995 to 2009.

Measurement of Resource Constructs

The measurements must be valid for any research to be reliable. However, the extent that RBV independent variables are intangible and difficult to observe makes measurements in RBV empirical studies difficult. Thus, creativity in the design of appropriate measurements is very crucial for RBV studies (Armstrong and Shimizu, 2007). Six approaches of measuring bank resources identified in the literature are: (1) indirect assessment through the use of observable attributes, (2) direct assessment through output counts, (3) direct assessment by top managers, (4) direct assessment by customers, (5) direct assessment by experts and (6) indirect assessment through inductive case studies.

Indirect Assessment through the Use of Observable Attributes

In view of the difficulty in observing RBV resources directly, RBV researchers have creatively used observable surrogate constructs that relate to the theorized intangible resources. For example, it is argued in the literature that a good organizational culture can be a source of sustainable competitive advantage since it is a resource that is hard to observe or duplicate (Barney, 1986; Bollinger and Smith, 2001; Hall, 1992). In order to operationalize the organizational culture resource to determine the strategic value of cultural resources in

banking, Richard (2000) used homogeneity-heterogeneity of demographic conceptions of organizational members such as sex and race to proxy for the banking firms cultural resources. The assumptions put forward by Richard (2000) is that, differences in demographic conceptions represent different cultural orientation of individuals in the group and that culturally diverse groups make for better quality decisions (Cox *et al.*, 1991; Pelled *et al.*, 1999).

In some studies, the observable characteristics of the bank's strategy are taken to represent the invisible bank resources. For example, in a study of the relationship between strategic group membership and performance differences in the Spanish banking industry, Zuniga-Vicente *et al.* (2004) used balance sheet items such as commercial loans, portfolio of securities, treasury, saving and deposits, current accounts, borrowed capital and net position in financial markets to define bank strategy choices. Their study assumed that, each strategic choice represents different resource configuration for the banks. This assumption is consistent with (Mehra, 1995), who argue that systematic differences exist between firms within a strategic group as a result of past strategic choices to invest in building resource bundles which are often difficult to imitate.

In the strive for more objective methodologies, strategic management researchers have also used input based proxies as indirect measures of resources (Armstrong and Shimizu, 2007). For example, it is argued in the RBV literature that employees collectively can be a unique source of competitive advantage that cannot be easily imitated by competitors (Grant, 1996; Liu *et al.*, 2009b). Invoking the RBV in the study of information technology capability and value creation in the US banking industry, Lin (2007) used labor and related expenses divided by the number of employees to proxy for the level human capital of the banks. Similarly, Ohnemus (2009) used proportion of branding expenditure to total turnover as proxy variable for banks' brand resource in order to study the relationship between branding and financial performance of banks. Using input measures assumes that the market defines the cost of inputs as well as performance. For example, Pulic (1998) argues that market defines the employees' salaries but also the results of their performance, thus labor expenditures are not only seen as compensation for invested time but also as compensation for knowledge inputs.

Direct Assessment Through Output Counts

Rather than measuring inputs, output measures are seen as more consistent with the RBV tenets (Armstrong and Shimizu, 2007) as they are based on the assumption that the output of the firm is the result of deployment of certain types of valuable firm resources. For example, it is argued in the literature that innovation capability is particularly important in the banking industries where competitive moves are easily imitated (Bhide, 1986; Mehra, 1995). To test the strategic value of innovativeness in a study of Australian retail banks, Roberts and Amit (2003) used innovation count data of reported Australian firsts to measure banks' innovative activity. The study was able to empirically relate banks' deployment of innovative capability to produce innovations and bank performance.

Direct Assessment by Top Managers

The use of top management members as key respondents is relatively common in strategy research (Snow and Hrebiniak, 1980; Bowman and Ambrosini, 1997). Member of top management team are assumed to possess the ability to identify sources of a firm's sustainable competitive advantage with high degree of reliability (Aaker, 1989). Hall (1993) suggests that, members of top management team are the only persons with responsibility

for managing intangible resources. A number of RBV studies in the banking industry have used top management respondents to provide assessment of bank resource. For example, Reed *et al.* (2009) used senior managers in charge of the Personal Banking unit to study the importance of resource changes in response to environmental dynamism in impacting bank performance. Senior managers were asked to provide Likert-type ratings on the changes (increase/decrease) in human capital and internal/external social capital items.

The literature argues that management of human resource is a very important capability for success for most firms (Liu and Sui, 2004, 2005). In a study of the influence of human resource management capability on savings bank performance, Perez and Falcon (2004) used seven point Likert scale ratings of human resource managers from the Spanish savings banks indicating the importance their banks attach to various human resource practices (such as personnel selection, performance appraisal, incentive compensation and so on). In a study of the strategic determinants of service quality and performance in the banking industry, Roth and Jackson (1995) used ratings by heads of US retail banking on the relative technological leadership, marketing capability, resource utilization efficiency, quality of customer interface in order to obtain the assessment of the banks' resources. In a study of the relationship between Customer Relationship Management (CRM) capabilities and banking firm performance, Coltman (2007) used ratings by members of top management regarding level of CRM-related IT infrastructure, human skills and the experience of converting data to customer knowledge and business architecture (alignment of incentives, customer strategy and structure) relative to their direct competition on a five-point scale. In a study of the antecedent and consequences of learning during financial innovations, Blazeovic and Lievens (2004) surveyed bank executives who have been involved in the development process of new financial service projects. The items for the constructs were adopted from the literature and some were custom designed. Two scales were used alternatively: a five-point Likert scale and a five-point rating scale.

Direct Assessment by Experts

Armstrong and Shimizu (2007) suggests that, since RBV deals with competitive advantage of the firm over competitors, outsiders such as competitors or experts should be ideal targets for researches that seek to assess the strategic value of firm resources. However, due to the difficult of directly asking competitors, experts are considered most ideal. For example, in one of the most influential RBV studies in banking, Mehra (1995) used average rating of experts on the individual bank resources items identified from the literature and verified by industry experts to study the influence of resource- and market-based factors on performance in the banking industry. The experts were asked to rate the resources of each bank relative to the industry as a whole.

Direct Assessment by Customers

Fahy (2000) suggests that the value of the firm's resources is best assessed in terms of how the resources help the firm to improve its efficiency and effectiveness in meeting the needs of customer. Thus, theoretically, the customer is in the best position to provide assessment of resources' value to customer. For example, it is argued in the literature that reputation with respect to a bank's integrity and quality of services creates value since it enables the bank to gain business from rivals and attract high quality people to work for the bank (Clulow *et al.*, 2003). Bontis *et al.* (2007) used customer respondents to test the reputation-performance relationship in banking. They measured reputation, loyalty and the likelihood of customer recommendation on a Likert scale. In a study of the antecedents of

service and product quality and their influence on bank reputation, Wang *et al.* (2003) used customer respondents to measure features such as reliability and responsiveness on a seven-point Likert scale to represent customers overall evaluation of service quality.

Indirect Assessment through Inductive Case Studies

According to Lockett and Thompson (2001), many of the insights of the RBV where intangible resources are involved can only be explored using a case approach. Case studies allow the researcher to obtain subtle clues on the unobservable resources in an idiosyncratic situation. For example, it is argued in the literature that a good learning environment within the firm can generate sustainable competitive advantage that is hard for competitors to imitate (Blazevic and Lievens, 2004). In order to probe the effective learning mechanism for designing valuable corporate identity in banking, Mitki *et al.* (2007) employed in-depth interviews with senior management and employees at a leading Israeli banking firm, they also examined written documentations. The case study methodology enabled the research to define the effective learning mechanisms for developing valuable corporate identity for the bank. In another study, Smith *et al.* (1996) using case examples, invoked the RBV in the study of the influence of tangible resources such as IT on bank performance and the mediating role of organizational learning. They propose that organizational learning is a capability that mediates the sustainability of competitive advantage generated by common resources, such as IT resources, in banking.

Operationalization of Performance Constructs

The primary performance outcome of interest in RBV is sustainable competitive advantage which affords superior performance (Galbreath, 2005; Conner, 1991). Sustainable competitive advantage requires the firm to have a balanced performance on both financial and strategic aspects (Liu, 2000). It is argued in the literature that, financial results are nothing but lagging indicators of strategic performance (Kaplan and Norton, 1992, 1996). The balanced scorecard approach recommends a firm's performance to be measured in terms of both financial outcomes and on aspects that drive future performance of the firm such as customer, internal business process, learning and innovation.

All the 15 studies reviewed used different sets of financial and nonfinancial performance measures. 6/15 of the studies used only financial measures, 5/15 of the studies used only nonfinancial measures and 4/15 of the studies used a mix of financial and nonfinancial measures.

Financial Measures of Performance

RBV studies that use only financial measures of performance hypothesize that, a firm can only obtain superior financial outcomes if it possesses superior resources that confers it competitive advantage. The association of competitive advantage to superior profits is a central assumption in strategic management research (Porter, 1985). Coyne (1986) points out that, although competitive advantage may not necessarily lead to superior profits, in a competitive market a firm can only earn superior profit if it enjoys competitive advantage. Studies that rely on only financial measures of performance are guided by Coyne (1986)'s assumption that financial performance flows from competitive advantage, as in the following studies. Mehra (1995) used three-year averages (in some cases 2 year averages) of return on average assets, profit per employee and price earning ratio as performance measures. Reed *et al.* (2009) used logarithm of loan margin (similar to return on assets) growth over three years as performance construct. Lin (2007) used 5-year averages of return on equity,

market value added, Tobin's q and market-to-book value ratio as performance measures. Ohnemus (2009) used market-to-book value and return on assets for the 5-year period as dependent variables. Roberts and Amit (2003) used return on assets to proxy for bank performance. Zuniga-Vicente *et al.* (2004) used five financial performance measures: return on assets, return on equity, proportional growth in market share, proportion growth in assets and solvency to proxy for bank performance.

Nonfinancial Measures of Performance

RBV studies that use only nonfinancial measures of performance hypothesize that, financial results will follow improvement in the nonfinancial measures. In the following studies, it is assumed that the nonfinancial performance variables are directly linked to the bank's sustainable profitability. Bontis *et al.* (2007)'s performance variables are represented by customer loyalty and the likelihood of customer recommendation. Wang *et al.* (2003) used reputation, measured by overall respondent perception of total experience in the bank branch relative to other branches, as a measure of performance. Smith *et al.* (1996) used the persistence of competitive advantage of IT resources as a performance construct. Blazevic and Lievens (2004) measured performance in terms of corporate reputation, competitive position, cross-selling and service delivery capability. Mitki *et al.* (2007) used valuable corporate identity (i.e., corporate identity that makes the firm more profitable) as a performance construct.

Both Financial and Nonfinancial Measures of Performance

RBV studies that use both financial and nonfinancial in the same study draw insights from the balanced scorecard approach (Kaplan and Norton, 1992, 1996). A number of studies in banking have attempted to use balanced sets of performance measures. For example Richard (2000) used income per employee, return on equity, relative marketing performance, relative sales growth, relative profitability and relative market share as measures of bank performance. Roth and Jackson (1995) used degree of conformance to banking unit's goal, pretax profitability, relative service quality and relative knowledge capabilities as performance measures. Perez and Falcon (2004) used 3 year profitability averages (net interest income divided by average assets), productivity (interannual average variation of the operating margin divided by number of employees) and turnover (rate of turnover during the three years studied) as dependent variables. Coltman (2007) used subjective assessments of a bank performance relative to other banks based on return on investment after tax, new product revenue generation and sales growth based on preceding three years performance.

Confounding Variables

To avoid spuriousness in the results, well designed RBV studies need to control for confounding factors. For example, asset size is frequently associated with scale advantages, thus larger banks, owing to scale advantages, are able to produce at relatively lower average costs than smaller banks. The effect of size is also emphasized in banking research as a measure of industry structure. Although the RBV literature suggests that the impact of industry factors on a bank's performance is generally less significant than bank-level factors, in some cases it still represents an important determinant of performance (McGahan and Porter, 1997). A firm's industry factors such as seller concentration (Bain, 1951), intensity of competition (Porter, 1980) have a direct influence on the ability of the bank to generate profits. Thus a number of RBV banking in our review use asset size to control the influence of banking structure and scale advantages in the results (Richard, 2000; Lin, 2007; Ohnemus, 2009).

Macroeconomic variables such as inflation and business cycles can also have significant influence on the banking sector's overall performance (Demirguc-Kunt and Huizinga, 1998). However, the current review does not find any RBV study which takes macroeconomic variables into consideration. Other controls can also be employed depending on the hypothesized relationship of the constructs studied. For example, in the study of the influence of cultural diversity on bank performance, Richard (2000) employed controls for the effect of parent bank resources on subsidiary banks, gender diversity, loan portfolio diversity, geographical scope and attitudinal measure toward diversity. Reed *et al.* (2009) used age of employees, number of employees and average turnover of the last 3 years as control variables. Ohnemus (2009) also included market capitalization, investment intensity, ownership structure, stock market beta, market share, diversification and capital structure as control variables. Roberts and Amit (2003) used the annual average profitability experienced by all banks in the sample banks and bank history (e.g., former state bank, former building society, new entrant) as control variables.

DISCUSSION AND CONCLUSIONS

The central aim of the RBV is to define sustainable competitive advantage of a firm (Thomas and Pollock, 1999). Thus, theoretically, the major aim of RBV studies is to identify and test firm-level factors that generate sustainable competitive advantage. A firm can have several advantages over rival firms ranging from superior production system, ability to deliver superior customer service and so on. Porter (1985) classifies the locus of advantages of a firm in the market-place into two general categories: lower cost advantage and differential advantage. A firm with lower cost structure will be able to earn higher profits even if its products are priced at same level as competitors' products. Likewise, a firm with superior and well differentiated products based on key buying criteria for the market will be able to enjoy customer loyalty and price premium for its products.

The perspective of advantage as consequence of resource deployment imply that sustainability of advantages a firm has will be determined by the inability or unwillingness of existing and potential competitors to acquire and deploy similar resources in order to close the resource and therefore performance gap. As Coyne (1986) specifies: The most important condition for sustainability is that existing and potential competitors either cannot or will not take the action required to close the gap. Hence, firms that possess valuable and difficult to imitate advantages would persistently enjoy superior performance (Battor *et al.*, 2008). The perspective of competitive advantage sustainability as a consequence of competitors inability to take actions to close the advantage gap also implies that the persistence of competitive advantage may vary by industry. Thus, single industry studies, although lack generalizability, effectively control for industry-specific effect.

Most RBV studies in banking use a few years to approximate superior performance. Using short duration may be viewed as contradicting the RBV which views intangible resources as key drivers of sustainable superior performance (Barney, 1991; Peteraf, 1993). Furthermore, since, even imitable resources can provide short-term competitive advantage and superior performance (Barney, 1986, 1991), approaches that use short durations do not address the issue of resource inimitability for most industries.

On the other hand, financial services industry is cited as an example of where competitive moves are rapidly imitated and sustainable advantages are difficult to attain (Bhide, 1986). Thus, theoretically, measuring short duration competitive advantages may be appropriate for RBV studies in banking. However, since short duration competitive

advantages may be due to imitable resources, isolating competitive advantages into competitive advantages that is due to inimitable and that is due to imitable resources provides a greater challenge in RBV research in banking. Thus, in testing sustainability of superior performance in banking, imitable resources may be expected to also play a major role.

The current study is the first attempt to review the approaches of RBV studies in banking. Overall, most studies were able to establish a clear link between intangible resource constructs and performance outcomes. Based on this review, several points can be made. First, since competitive advantage is industry specific (Armstrong and Shimizu, 2007), our study adheres to the call in the literature for RBV empirical studies to focus on same industry firms in order to increase RBV studies practical value. Sheehan and Foss (2007) argue that the ability to ascertain the rent-generating potential of various resources is a very important implementation issue not covered by current RBV studies. The rent-generating potential of resources is industry specific, thus focusing on same industry will enable identification of resources that confer temporal or persistent competitive advantage in the context of a specific industry. Second, our study suggests that RBV approaches that relate resources, strategy and performance such as the one used in Richard (2000) have great potential to advance the RBV practically. The current study also calls for improvement of RBV banking studies on methodologies for combating confounding factors to cover macroeconomic variables.

The RBV is aimed to provide consistency in determination of the sources of competitive advantage of firms and subsequent specification of how competitive advantage can be sustained. This study recommends that to have more value for practicing managers, further research need to clearly define sustainability of competitive advantage in the context of the banking industry. There is also a need to clearly define the strategic role of intangible resources in industries such as banking where sustainability of competitive advantage is rare.

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