Does Good Personnel Management Practices give Agribusiness Firms a Competitive Advantage?

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Abstract

Agribusiness firms are often faced with the challenge of strategically managing employees to achieve a favorable position in the market (i.e. sustained competitive advantage). The resource based view (RBV) has been given considerable attention in the strategic management literature as a useful framework to analyze the significance of human resources in achieving sustained competitive advantage. However, there are few labor management studies in agribusiness that have used the RBV to provide evidence of a substantial relationship between any particular personnel management practice and competitive advantage. This paper provides an in-depth review of the RBV as a potential framework to analyze labor management practices in agribusiness. A case study is used to illustrate the application of this framework in the dairy industry and suggestions are made on how the framework can be extended and operationalized to guide future research and management practice in agribusiness

Keywords: Human Resource Management, Resource-based View, Agribusiness, Sustained Competitive Advantage

Introduction

The rise in agricultural productivity has been chronicled as one of the most important source of economic growth in the agricultural sectors of developing countries and this productivity growth has mainly been attributed to technological progress. However, despite the remarkable contribution of technological progress to productivity growth, the success of individual agribusiness organizations to remain competitive in the marketplace still relies heavily on the productivity of their employees, hereafter human resources.

The strategic importance of human resources to the economic success of agribusiness organizations is best captured by the following excerpt: "*In most industries, it is now possible to buy on the international marketplace machinery and equipment that is comparable to that in place by the leading global firms. Access to machinery and equipment is not the differentiating factor. Ability to use it effectively is. A company that lost all its equipment but kept the skills and knowhow of its workforce could be back in business relatively quickly. A company that lost its workforce, while keeping its equipment, would never recover*." (Becker et al., 2001 pp. 6)

Over the last two decades, the general trend in North America and Australian agriculture have been a decline of number of farms, an increase of average farm sizes, and a general shortage of sufficient and skilled workforce (Productivity Commission 2005; DEST, 2006; NASS 2002). In Australia, rural labor demand has increased since the 1990s, particularly hired rural. This is attributable a number of factors that include increase in the productivity of rural labour, overall increase in the volume of rural output, and compositional changes in rural output, with a growth in relatively labour intensive industries (Garnett and Lewis, 2002). The

combination of declining farm numbers, increasing size of operations and less family members returning to farms has meant a demand for employed labour with different skills.

As farms grow beyond the labor capacity of the immediate families, human resources management (HRM) becomes an important management function and practices developed for large non agricultural corporations often may not fit the agricultural or agribusiness environment (Bitsch, 2009). Therefore, HRM as a managerial function plays an important role in agriculture, particularly in the management of agribusiness organizations and large commercial farms. Traditionally, the HRM function has been viewed as the process of attracting, keeping and motivating employees.

The typical characteristic of most successful corporate organizations is a sustained competitive advantage that results from the configuration of their strategic assets to outperform their competitors. Sustaining competitive advantage in the long run is very crucial as competing firms will try to imitate, reach, and even outperform their rivals by acquiring similar or better resources that they perceive to be enabling their rivals outperform them.

Human resources are one of the crucial strategic assets in agribusiness and production agriculture. Farm and ranch owners, their family members and cooperating neighbors provide substantial labor to agricultural operations. However, hired employees provide most agricultural labor especially in labor intensive tasks that cannot be fully mechanized such as fruit picking and pruning. Attracting, motivating, and retaining qualified employees are some of they key challenges faced by agribusiness organizations. Equally, agribusiness managers face the challenge of managing their employees in an effective and efficient manner to remain

competitive in the marketplace. This calls for an understanding of how the HRM function can be tailored to be a prime source of sustained competitive advantage and key driver of value creation. However, agribusiness managers have little research based information to rely on when developing HRM policies and procedures. As noted by Bitsch (2009), this is partly because research on HRM practices in agribusiness has not received significant attention in the agribusiness literature due limited research funding, rare peer reviewed articles, and because many editors do not perceive HRM as a priority.

Given recent trends in the global food and agribusiness sector, agribusiness competitiveness has become a topic of much interest in both the popular press and in academic literature. The resource based view (RBV) has been given considerable attention in the strategic management literature as a useful framework to analyze the significance of human resources (HR) in achieving sustained competitive advantage. The view posits that firms with a well managed HR system have the potential to create economic value through their employees, but the potential is only realized when the HRM functions is aligned with the overall competitive strategy of a firm (Barney, 2001). However, as noted by Bitsch (2009), there are few labor management studies in agribusiness that have been able to provide evidence of a substantial relationship between any particular HRM practice and productivity or competitive advantage.

This paper attempts to remedy this situation by proposing the RBV as a potential framework to guide HRM practice and research in agribusiness. The purpose of the study is to demonstrate that HRM practices can be tailored into effective strategies to enable an agribusiness firm achieve competitive advantage. Indeed, empirical studies in non agricultural oriented industries suggest that there is a close relationship between the

employment of HRM instruments shaped according to the RBV and HRM efficiency (Zeithaml, 2001; Wright et al. 1999).

The remainder of paper is structured as follows: first, the fundamental tenets of the RBV are presented; second, empirical application of the RBV in strategic HRM is reviewed; third, a case study is used to illustrate the application of the RBV to analyze HRM issues in agribusiness and, fourth, the evidence from case study is used to illustrate how the RBV framework can be extended and operationalized to guide future research and management practice in agribusiness.

Resource-based View: Literature Review

Literature in strategic management presents two theoretical perspectives in explaining sources of competitive advantage (CA): The Porter's five forces perspective and the Resources-Based View` (RBV) perspective (Kim & Oh, 2003: 1). The first perspective views CA as a position of superior performance that a firm achieves through offering cost advantages or benefit advantages (Porter, 1980, 1981). This model attributes CA to the external environmental factors that a firm must respond to such as erecting barriers of entry to competitors, product differentiation, capital requirements, and buyer switching costs (Lado et al., 1992).

The second model of CA is the resource-based theory (RBV). The model is based on the assumption that the desired outcome of managerial effort within the firm is sustained competitive advantage (SCA) that allows the firm to earn above average returns (Fahy and Smithee, 1999: 1). This model view CA as emanating from the distinctive resources of a firm that gives it an edge over its rivals. An organization is viewed as a bundle of specialized

resources that are deployed to create a privileged market position (Barney, 1986a; Ghemawat, 1986; Day and Wensley, 1988). Therefore, the RBV emphasizes strategic choices where managers of a firm have the important task of identifying, developing, and deploying key resources to maximize returns (Fahy and Smithee 1999: 1). The theory focuses on the link between strategy and the internal resources of a firm in achieving CA rather than the industry-environmental focus characteristic of the traditional strategic analysis paradigms, for example, the Porter's "five forces model" (Wright et al., 1994: 302).

In the words of Barney (1991: 102), "a firm is said to have CA when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors." Fahy and Smithee (1999: 4) define CA as an advantage one firm has over a competitor or group of competitors in a given market, strategic group or industry. Sustained competitive advantage (SCA) occurs when any current or potential competitors of a firm are not implementing the value creating strategy and when those firms are unable to duplicate the benefits of the strategy (Barney, 1991: 102). Attainment of SCA is expected to lead to superior performance measured in convectional terms such as market share and profitability (Fahy and Smithee 1999: 4). The duration that a firm can sustain its CA is defined by the period in which current and potential competitors are not able to duplicate the strategy that makes a firm's competitive advantage sustainable rather than by calendar period (Barney, 1991: 102).

The resource-based view of the firm holds that SCA can only occur in situations where a firm's resources are heterogeneous and immobile (Barney, 1991:105; Peteraf, 1993). Those two assumptions differentiate between the resource-based view and the traditional strategic management model (Wright and McMahan, 1992). The traditional view of strategy assumes

that firm resources are homogenous across firms in the industry and that resources are mobile because firms can purchase or create resources held by competing firms (Wright et al., 1994: 303).

The literature in strategic management presents different categorization of resources. Barney (1991: 101) groups firm resources into three categories: physical capital resources, human capital resources, and organizational capital resources. Grant (1991: 6) lists six categories of firm resources: financial, physical, human, technological, reputation, and organizational. Fahy and Smithee (1999: 7) note that a firm's resources comprise three distinct sub-groups namely tangible assets, intangible assets, and capabilities. Given the variety of labels used to describe a firm's resource set, Barney (1991: 101) defines a firm's resources to include all assets, capabilities, organizational processes, firm attributes, information, and knowledge that it controls and that enable it to conceive and implement strategies that improve its efficiency and effectiveness.

From the foregoing definition, heterogeneity refers to how different resources are distributed across firms. Oliver (1997: 701) defines firm heterogeneity as "relatively durable differences in strategy and structure across firms in the same industry that tend to produce economic rents" and rents as "above normal rates of return." Peteraf, (1993: 180) notes that heterogeneity implies that the productive factors used in firms have intrinsically differential levels of efficiency whereby some are superior to others. Therefore, firms endowed with superior resources are economical in production and can effectively compete in the market compared to those without superior resources.

Resource immobility refers to the inability of competing firms to obtain resources from other firms (Wright and McMahan, 1992: 301). The resources of a firm can be immobile for several reasons. First, when the resources property rights are not well defined (Dierickx and Cool, 1989: 1505); second, when the resources have no use outside the firm (Williamson, 1975); third, when the resources are co-specialized, that is they are used in conjunction with another or have higher economic value when employed together (Teece, 1986); and forth when the resources have high transaction costs (Williamson, 1975). Since the immobile resources are non-tradable or are of less value to other users, they remain bound to the firm and available for use over the long run. Hence, the resources are a source of competitive advantage to the firm (Peteraf, 1993: 184).

The assumptions of heterogeneity and immobility of resources are necessary but not sufficient conditions for a firm's resources to hold potential for SCA. A resource must have four other attributes to provide SCA: 1) the resources must add value to the firm; 2) the resources must be rare among current or potential competitors; 3), the resources must be imperfectly imitable; and 4), the resources should not be strategically substitutable with another resource by competing firms (Barney, 1991: 105; Wright and McMahan, 1992: 301).

A firm's resources are valuable when they enable its management to conceive or implement strategies that improve its efficiency and effectiveness. Valuable resources enable a firm to capitalize on its strengths to exploit the opportunities in the external environment while neutralizing existing threats (Barney, 1991: 106; 1999). Fahy and Smithee (1999: 5) argue that although a resource may meet all the other three conditions, it is not considered a potential source of SCA if it is not valuable or cannot enable a firm to create value.

A resource is rare when it is not possessed by a large number of firms. Barney (1992: 106) urges that if a large number of firms possess a particular valuable resource, the resource becomes a source of competitive parity and not CA or SCA. This stems from the argument that a firm enjoys a CA when it is implementing a value creating strategy not being implemented by a large number of firms. Otherwise, if other firms possess the resource, each of them will exploit the resource by implementing a common strategy that lead to competitive parity.

Resources that are valuable and rare leads to the resources being imperfectly imitable, i.e., not easy to obtain or copy (Lippman and Rumelt, 1982; Barney, 1986a; 1986b). A firm may find it difficult to obtain a valuable and rare resource because of the cost disadvantage it faces compared to firms that possess that resource (Barney, 1992). Derricks and Cool (1989) describe three conditions under which resources can be imperfectly imitable. First, when the ability of the firm to obtain resources is dependent on unique historical conditions; second, when the link between the resources and the firm's competitive advantage is causally ambiguous; and third, when the resource generating a firm's competitive advantage is socially complex.

The first condition states that the performance of a firm not only depends on the industry structure within which a firm finds itself at a particular point in time but also on the path a firm followed through history to arrive where it is, i.e. path dependent (Barney, 1991: 108). For example, as firms evolve, they employ human resources with different skills and abilities and acquire other resources that are unique, reflecting their particular path through history. Those resources reflect the unique personalities, experiences, and relationships that exist in a single firm. Therefore, a firm may obtain valuable and rare resources because of its unique

path through history and use the resources in implementing value-creating strategies that cannot be imitated by other firms (Barney, 1991; 1992). Besanko et al. (1996: 595) argues that even small path dependencies have important CA consequences. For example, a firm that developed significant commitment to a particular way of doing business may find it hard to adapt to minor changes in technology.

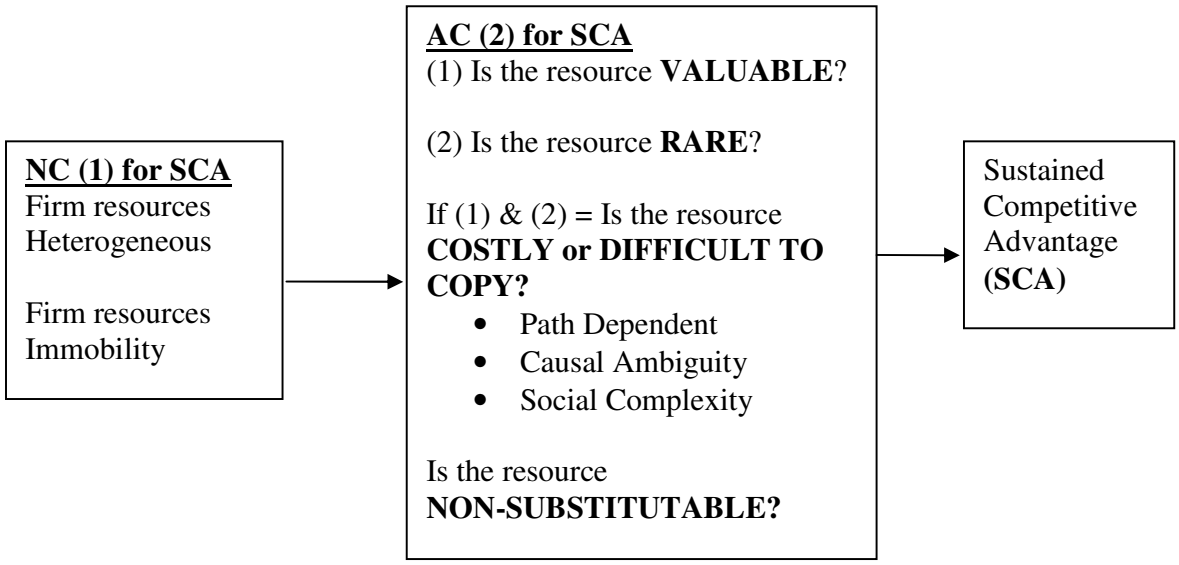
Causal ambiguity is defined as the situation where the link between the resources controlled by a firm and its SCA is not understood or only understood imperfectly (Lippman and Rumelt, 1982; Reed and DeFillippi, 1990; Barney, 1991). In this case, the relationship between a resource and other firm-specific resources and capabilities creates uncertainty regarding the causes of efficiency differences among firms. This prevents would-be imitators from knowing exactly what to imitate or how to imitate it (Lado et al., 1992; Peteraf, 1993: 187). Casual ambiguity arises out of an informational problem where a competitor is unable to identify what are the reasons behind a given firm's success (Fahy and Smithee 1999: 5).

Social complexity is a complex social situation arising from human interaction and constitutes a competitive advantage. According to Wright et al. (1994: 309), the term refers to the fact that many social phenomena are complex to make it possible to manage and influence them systematically. Examples of social complexity in a firm's resources include (1) the interpersonal relationship among managers (Hambrick, 1987), (2) organizational culture (Barney, 1986b), (3) reputation among suppliers (Porter, 1980), and (4) a firm's relationship with customers (Klein and Leffler, 1981).

The final requirement for a resource to be a source of SCA, non-substitutability, demands that a firm's resource must not have other strategically equivalent resources that competitors can

substitute for it. Therefore, other competing firms cannot implement the same strategy because of the absence of another strategically equivalent resource to generate the SCA (Barney, 1991: 111).

Figure 1 presents a conceptual framework for understanding the assumptions and conditions relevant for attaining SCA as postulated by the RBV. The theory is based on two main assumptions, resource heterogeneity and resource immobility. Those two assumptions qualify a resource to be a source of CA but not SCA (Wright and McMahan, 1992: 301). Once those two conditions are satisfied, the assumptions of value, rareness, inimitability, and non-substitutability generate the additional conditions for a resource to be a source of SCA.



NC = Necessary Conditions **AC= Additional Conditions**

SCA = Sustained Competitive Advantage **NC (1) & NC (2) = SCA**

Figure 1. Conceptual framework for sustained competitive advantage as postulated by the Resource-based View

Peteraf (1993: 186) notes that the RBV is important because it explains long-lived differences in firm profitability that cannot be attributed to differences in industry conditions. Bowman (2003: 1) points out that the RBV recognizes that resources can be built or bought and deliberate creation of resources would be part of the managerial activity. Paauwe and Boselie (2002) observe that RBV is the dominant theory being used in the empirical literature on the relationship between HRM and performance.

Applications of the RBV to HRM

Drawing from the RBV of the firm, literature in strategic HRM is increasingly concerned with whether HR can be a source of CA (Reed and DeFillippi, 1990; Wright and McMahan, 1992; Wright et al., 1994; Kamoche, 1998). Ulrich (1991), Wright et al. (1994), and Barney and Wright (1998) used the BRT to describe how HRM practices can be used to develop strategies that leads to CA.

Wright and McMahan (1992) and Wright et al. (1994) describe two conditions in the labor market that make human resources a source of CA: 1) the heterogeneous demand for labor, and 2) the heterogeneous supply of labor. The authors argue that human resources add value to the firm because of the existence of heterogeneous demand for labor and supply of labor. Heterogeneous demand for labor exists because firms have jobs that require different skills. For example, the skills needed to work on a dairy farm are different from those required to work in a greenhouse operation. Heterogeneous supply of labor exists because individuals differ in their skills and level of skills. Those two conditions ensure that human resources with high competencies provide value to the firm. Wright et al. (1994: 306) argues that there would be no variance in an individual's contribution to the firm if both the demand for and

supply of labor was homogeneous, i.e., all employees and potential employees have equal productive capacity. In this case, there would be no need to create value through investment in employee training and development. However, Barney and Wright (1998: 32) note that the main goal of HR executives is to create value through the HR function. The authors argue that a firm can create value by either decreasing product and services costs or differentiating the product and services in a way that allows the firm to charge a premium price. Employees using a less expensive insurance plan to enable an organization hold down its cost of health insurance are cited as an example of how human resources can create value for the firm. Richard (2000: 165) notes that cultural diversity in human capital can serve as a source of competitive advantage because it creates value that is both difficult to imitate and rare.

Wright et al. (1994: 308) used the difference in cognitive abilities of individuals to demonstrate that human resources are rare. The authors argued that jobs require individuals to have different skills that allow for variance in individuals contributions in organizations. Hence, since these skills are normally distributed, human resources with high ability levels are rare. Therefore, firms with employees of high average cognitive ability relative to their competitors possess more valuable human capital resources. The ultimate goal of all selection programs is to ensure that the organization is hiring only individuals with highest ability. Barney and Wright (1998: 34) use an example from a firm in a highly competitive retailing industry to demonstrate how a firm can develop and exploit rare characteristics of its human resources to gain competitive advantage. The retailing industry is characterized as having low skill requirements and high turnover for sales clerks. Assuming the labor pool for sales clerk is homogenous, a firm can invest in attracting and retaining young college-educated sales clerks who desire a career in retailing. The firm can provide high incentive based

compensation system that allows the sales persons to earn twice the industry average in pay. In this example, the firm takes labor that is considered homogenous and exploits its rare characteristic - those individuals who desire a career in retailing - to gain competitive advantage.

Wright et al. (1994: 309) demonstrate how human resources meet the third criteria of a resource being inimitable by using the concepts of unique historical conditions, causal ambiguity, and social complexity. Human resources are inimitable when the firm has a unique history over the course of which particular cultures and norms develop. The culture and norms may meld human resources together to create a synergistic work culture where individuals cooperate in line with organizational goals. Such an organizational culture rooted in its history may not be imitable. Casual ambiguity leading to efficient production in one firm may be due to teamwork whereby it is impossible for a rival firm to create a team with similar attributes. Social complexity may arise out of transaction specific relationships whereby there is knowledge and trust between employees and other business stakeholders that are hard to analyze and imitate. Barney and Wright (1998: 34) also point that social complex phenomena such as an organization's unique history or culture cannot be easily imitated by competitors. The authors cite the culture of trust in Southwest Airlines where the management provides employees with both the desire and discretion to do whatever it takes to meet the customers' needs as an example of a socially complex phenomenon. Richard (2000: 166) agues that human resources cannot be easily imitated because they are protected by knowledge barriers and are socially complex because they involve a mix of talents that are elusive and hard to understand.

The fourth condition for a resource to be a source of sustained competitive advantage is not to have substitutes. Wright et al. (1994: 312) argues that human resources are one of the few firm's resources that have the potential of not becoming obsolete. Therefore, if one firm develops a technology that provides greater productivity than what is generated by a rival firm that relies on human ability, once the latter firm is able to purchase the new technology its human resources would again become a source of competitive advantage. This is because technology can be purchased in the market place or become obsolete while human resources with high cognitive ability and highly committed to the firm are valuable, rare and cannot be imitated. Hence, human resources are non-substitutable.

RBV and Empirical Research on Strategic HRM

Several scholars have used the RBV to conduct empirical research in strategic HRM. King and Zeithaml (2001) used the RBV to develop and test hypotheses that relate manager's perceptions of causal ambiguity to their firm's performance. The hypotheses examined the relationship between firm performance and causal ambiguity regarding the link between competencies and CA, and the causal ambiguous characteristics of competencies. On-site interviews were held with 224 executives in 17 organizations in the textile and hospitality industries to identify different competencies. Surveys were also sent to all the executives and the response rates were 92% for the textile industry and 88% for the hospitality industry. Relationships between variables were tested using Pearson correlations and the study results revealed that causally ambiguous characteristics regarding competencies were associated with higher firm performance.

Richard (2000) used the RBV to examine the relationships among cultural (racial), diversity, business strategy, and firm performance in the banking industry. Mailed surveys were used to collect data from 574 banks and the response rate was 16% of the sampling frame. The study results indicated that racial diversity interacted with business strategy in determining firm performance measured by productivity, return on equity, and market performance. The author concluded that cultural diversity does add value to a firm, and within the proper context, contributes to its competitive advantage. Diversity ensures a variety of perspectives that is rare because few firms have achieved significant levels of diversity and that socially complex dynamics inherent in diversity leads to its inimitability.

Wright et al. (1999) examined the impact of HR practices (selection, training, compensation, and appraisal) on the financial performance (profit margin, annual profit growth, and annual sales growth) of U.S. petro-chemical refineries. Surveys were sent to 190 HR managers of refineries and the overall response rate was 20%. Regression analysis was used to analyze the data. Survey results indicate that appraisal and training were significantly related to workforce motivation. Selection, compensation, and appraisal interacted with participation in determining the refinery financial performance. Only under highly participative systems was each of those practices strongly positively related to financial performance. The authors concluded that human resources could be used as levers through which firms develop a skilled and motivated workforce that can be a source of competitive advantage.

Koch and McGrath (1996), drawing from the RBV, developed a conceptual framework which suggested that investment in HR planning, recruitment, selection, and employee development have a positive effect on a firm's performance in the form of labor productivity. This hypothesis was tested on a sample of 319 business units. The research findings show that the

way in which an organization manages its human resources has a significant relationship with productivity of its employees. The authors conclude that competitiveness of a firm is related, at least in part, to its investment in human assets. Firms that have effective routines for acquiring human assets develop a stock of talent that cannot be imitated, and that those HR practices are related to labor productivity, especially in capital intensive organizations.

Wright et al. (1995) examined the extent to which congruence between an organization's strategy and its human resources affects performance. The authors assumed that different strategies require different skills and, therefore, organizations seeking to pursue different strategies will seek out different skills from employees. The relationship between skills and performance was assumed to differ across strategies too. A survey was used to collect data from coaches of 300 National Collegiate Athletic Association (NCAA) men's basketball teams. The study focused on how the fit between the skills of team members and the strategy they employed impacts performance. The study found that teams whose coaches used a different strategy from their preferred strategy performed lower than teams where the coach was able to use his preferred strategy. The results indicate that strategies may determine the types of human resources sought and that the type of human skills available might also influence the strategy chosen.

Agribusiness Case study: Managing Labor on Dairy Farms: A Resource-Based Perspective with Evidence from Case Studies (Mugera and Bitsch, 2005)

Mugera and Bitsch (2005) applied the resource based theory as a framework to analyze labor management on six dairy farms in Michigan. A case study research design that employed in-

depth interviews with farm managers, supervisory, and non-supervisory employees was used to illustrate the provisions of the RBV in agribusiness. The case study approach was appropriate because the studies investigated a contemporary phenomenon, labor management on dairy farms, and sort an in-depth understanding of the phenomenon within the framework of the actors involved.

The purpose of the study was to describe labor management practices of dairy farmers and to identify whether and how those practices contribute to farm competitiveness. Given the limited availability of prior research in agriculture, the nature of the study was explorative and employing a qualitative research methods. The study addressed the following issues: (1) mission and goals, (2) recruitment and selection, (3) orientation and training, (4) compensation systems, (5) employees' mistakes and discipline, and (7) voluntary turnover and termination. The key results from the study are as follows:

Resources are immobile when they cannot be transferred easily from one farm to another. Internal hiring deterred the transfer of specific skills and knowledge from one farm to another. Trained employees have higher replacement costs because they supply services that cannot be immediately provided by newly hired employees. Managers strived to retain those employees through offering job security, higher compensation, and good interpersonal relationships that lead to their immobility.

Managers of dairy farms can **create value** by either decreasing operational costs or increasing revenue and employees play a major role in achieving these goals. Employees contributed to this goal by taking measures to ensure a low somatic cell count. Employees also contributed

to creating value by striving to achieve other goals such as heat detection, successful insemination, and a low calf mortality rate.

The resource-based theory posits that a resource must be **rare** to be a source of competitive advantage. Dairy farmers reported difficulties in recruiting employees with the requisite skills and knowledge. Farmers who had made the transition from hiring local employees to immigrant employees did not want to revert to the local workforce. This evidence supported the notion that skilled and knowledgeable employees who liked working on a farm were a rare resource.

Path dependency, social complexity, and causal ambiguity contributed to farms developing distinct human resource systems that were **not imitable**. Managers selected and hired non-supervisory employees based on their kinship and friendship ties with current employees because they wanted to staff their farm with compatible employees. **Causal ambiguity** describes the inability of competitors to identify and imitate the sources of a firm's competitive advantage. For example, a large farm provided higher wages, more benefits, and training opportunities to employees compared to a smaller farm. Yet, employees on both farms reported to be satisfied with their current employment. Therefore, employee satisfaction was a source of causal ambiguity. The route that the farm took in the past influenced its ability to achieve competitive advantage through its human resource system. For example, one manager mentioned that family values and beliefs determined the farm's organizational culture. Family employees trusted each other and subsequently trusted their hired employees. The manager also said, he had a trusting relationship with his supervisory personnel and did not expect them or the employees they supervised to commit costly mistakes.

Employees on dairy farms were **non-substitutable resources**. All case farms hired year-round fulltime employees because dairy farming could not be fully automated. Even on highly mechanized farms, human resources were needed, e.g., to monitor the herd health, administer treatment, and assist calving cows. Current technology and machinery becomes obsolete over time, but human resources that are constantly educated and trained retain their value. Increasing capital results in an increasing number of cows per employee, but does not replace human resources entirely.

Across case comparisons of the labor management practices indicated that each case had a distinct human resource system emanating from its organizational culture, kinship and friendship ties, and resource endowment. Organizational outcomes, such as voluntary turnover and termination rates, employee satisfaction, and manager satisfaction did not stem from single or isolated labor management practices. Therefore, in each case, the manager had the potential to develop his or her own unique human resource system as a source of sustained competitive advantage.

Recommendations for Future Research

The RBV was a useful theoretical framework for understanding how human resources in the six dairy cases can be a source of competitive advantage and the role of the HRM function in this process. To gain better understating on how to achieve competitive advantage through HR, future empirical research should narrow the gap between the theoretical utility and the practical utility of the resource-based view (RBV) by operationalizing the theory in agribusiness environment. Levitas and Chi (2002: 960) and Rouse and Daellenbach (2002:

965) both state that RBV can be validated empirically without having to operationalize all its key constructs.

The model depicted in Figure 2 provides a conceptual framework of how different HRM practices from the case study relate to the four key assumptions of the RBV.

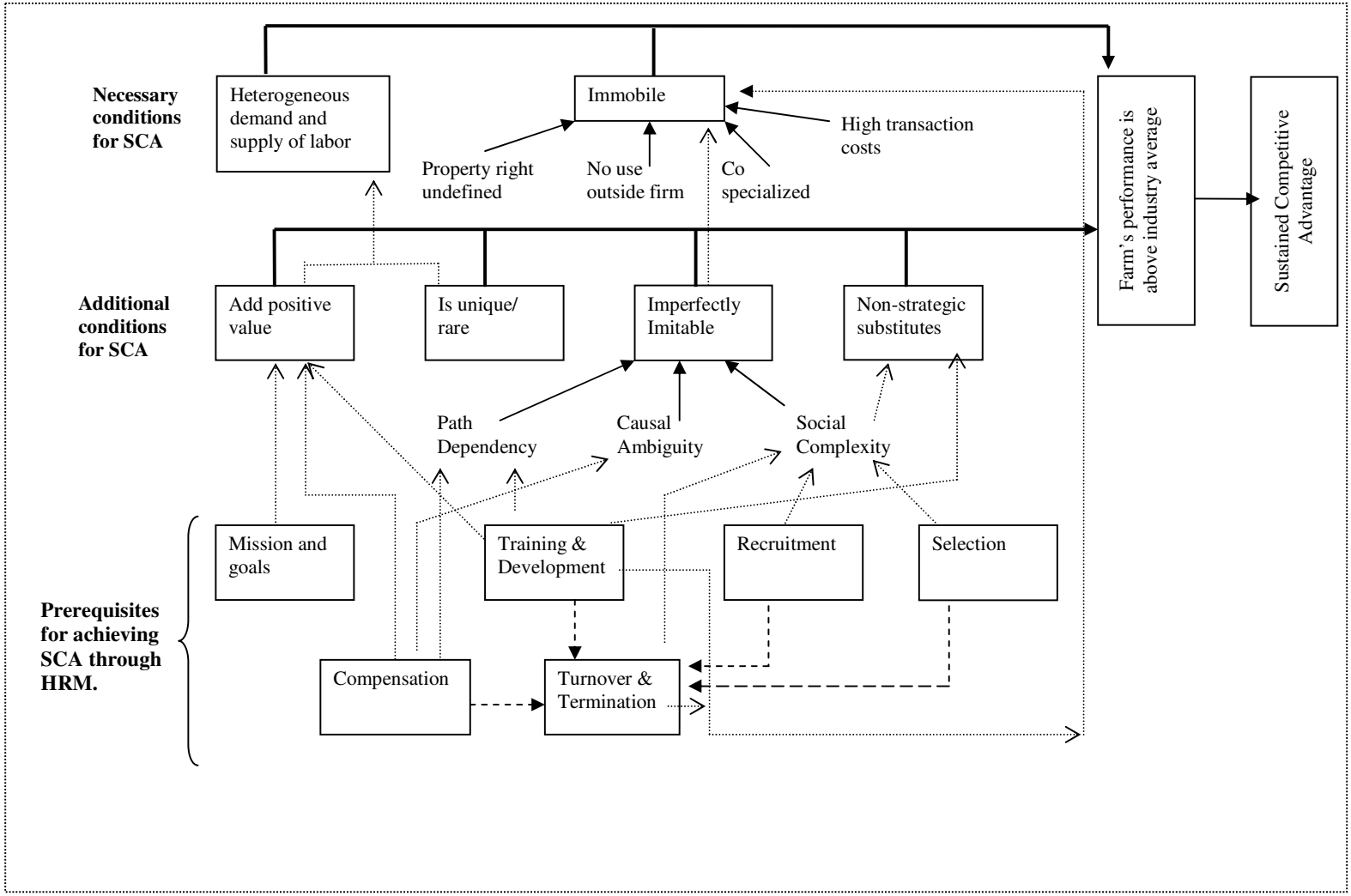


Figure 2. A Proposed Conceptual Framework for Human Resource Based Theory

The model also draws from the work of several authors on the RBV (Barney 1991, Wright et al., 1994 and 2001) to demonstrates that SCA is not just a function of isolated HRM practices, like compensation and human resource development, but of the integration of HR practices, managerial function, and employee behaviors into an HR system that is a strategic partner to the overall competitive strategy of an organization.

The dotted arrows from the boxes with HRM practices indicate how the practice relates to the four key assumptions of the RBV. For example, the arrow extending from compensation to add positive value indicates that managers can use compensation to add value to the farm, say by providing performance based incentives. The arrow extending from compensation to path dependency indicates that the compensation system of a firm is path dependent. Solid arrows that link path dependency, causal ambiguity, and social complexity indicate that those three factors lead to a resource being imperfectly inimitable. Likewise, solid arrows linking to immobility indicate the factors that contribute to a resource being immobile.

The dotted arrows linking add value and rare to heterogeneity indicate that the assumptions of a resource being valuable and rare contribute to the resource being heterogeneous (Barney, 1991; Lado and Wilson, 1994). The dotted arrow linking imperfect inimitability to immobile indicates that meeting the conditions of not being easy to imitate also contributes to a resource not being easy to transfer from one case to another. Therefore, to empirically test the relationship between the HRM function and the performance of a farm based on the RBV, one needs only to test whether human resources meets the four key assumptions of being valuable, rare, imperfectly inimitable and having no strategic substitute.

The dashed arrows from compensation, training and development, recruitment, and selection indicate that those four practices have an effect on termination and voluntary turnover. Termination and turnover together with the direct effect of training and development eventually affect the mobility or immobility of human resources. The solid lines indicate the conditions postulated by the RBV for a resource to generate competitive advantage.

Before testing the theory one needs to operationalize the key criteria that human resources and the HR system have to meet to fulfill the RBV assumptions of a resource being valuable, rare, inimitable and non-substitutable. This can be achieved by constructing proxy variables that correspond with each of the key assumptions. A Likert scale would be useful to quantity the variables for the purpose of quantitative analysis.

For example, Dyer and Chu (2003) operationalised trust using multiple scale items designed to measure the extent to which the supplier trusted the automaker not to behave opportunistically. Each scale item was measured on a seven-point Likert scale. King and Zeithaml et al. (2001) used a protocol of open-ended questions to identify a range of competencies by interviewing 224 executives in 17 organizations to test managers' perception of causal ambiguity regarding the link between competencies and firms' performance. A total of 69 competencies were generated in two different industries. Survey items based on a seven-point Likert scale were used to assess how managers perceived whether their organization was at an advantage or disadvantage with respect to its competition for each competency. Paladino et al. (2000) generated 17 items on a five-point Likert scale to test the RBV assumptions of inimitability.

Conclusion

This paper has provided a comprehensive review of the resource-based view as a framework to formulate HRM strategies to achieve sustained competitive advantage. Drawing from the fundamental tenets of the theory, a review of empirical studies in strategic HRM served to illustrate how the concept can be applied in agribusiness. A case study in agribusiness was used to illustrate how the different HRM functions fit to the theory. Given that this type of study is still in the explorative stage, a conceptual framework on how to operationalize the theory in agribusiness is proposed.

The paper demonstrated that that the HRM system is a potential source of sustained competitive advantage for agribusiness firms. Employees in agribusiness firms are enablers of change and can help the agribusiness organizations to dynamically develop and achieve longer-term sustainable competitive advantage. However, the gap between the theoretical utility and the practical utility of the resource-based view (RBV) need first to be narrowed by operationalizing the theory in the agribusiness environment.

The management implication of this study is that agribusiness managers can use the RBV framework to configure how their HRM system operates and identify ways in which it can be customized to be a source of SCA. This would involve a shift of perspective from one that sees the HRM function as primarily administrative to recognizing the HRM function as a key player in the overall competitive strategy of a firm.

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