Human Resource Management Review 23 (2013) 366–377

Contents lists available at ScienceDirect

Human Resource Management Review

journal homepage: www.elsevier.com/locate/humres

Strategic human resource management and supply chain orientation

Mark L. Lengnick-Hall [1], Cynthia A. Lengnick-Hall *, Carolee M. Rigsbee [2]

Department of Management, University of Texas at San Antonio, One UTSA Circle, San Antonio, TX 78249-0634, United States

ARTICLE INFO

Keywords:
Strategic human resource management
Supply chain
Strategic fit

ABSTRACT

Most SHRM research has concentrated on single, focal organizations and on activities taking place within the firm. The purpose of this article is to lay a foundation for studying SHRM in the supply chain. We present a framework which identifies factors that influence whether adopting a supply chain orientation (SCO) is effective, and articulates the contingencies that shape SHRM practices needed to achieve and capitalize on SCO. We make several contributions to the strategic human resource management and supply chain literatures. First, we highlight this neglected area of research. Second, we expand the boundary conditions of strategic human resource management and HR systems from a primarily single firm, intra-organizational focus to one which includes both intra- and inter-organizational relationships. Third, we provide a framework for understanding the links between HR systems, SCO, and strategic outcomes. Fourth, we build upon previous theorizing in strategic human resource management and provide a framework for research in the supply chain context. And finally, we offer propositions for future research, along with a decision making model which has implications for both research and management practice.

1. Introduction

Despite Schuler and MacMillan's (1984) groundbreaking article discussing strategic human resource management (SHRM) applied to the supply chain, only limited research has addressed this important topic (Lengnick-Hall, Lengnick-Hall, Andrade, & Drake, 2009). Most SHRM research has focused on single, focal organizations and on activities taking place within the firm. Even Wright and McMahan's (1992, 298) widely accepted definition of SHRM as "the pattern of planned human resource deployments and activities intended to enable an organization to achieve its goals" appears to imply a single, intra-organizational perspective. However, both internal and external relationships and activities contribute to strategic goal attainment and superior performance (Barney, 1986). Studying SHRM in the supply chain expands the boundaries of the field to include inter-organizational relationships that contribute to goal attainment. This complements the customer human resource (HR) orientation introduced in the SHRM literature in the late 1990s (e.g., Lengnick-Hall & Lengnick-Hall, 1999) and recent shifts in supply chain management theory from total cost to customer-value market orientation driven theory (e.g. Bowersox, Closs, & Stank, 2000; Lancioni, 2000; Mentzer et al., 2001; Min, Mentzer, & Ladd, 2007).

Recent trends in supply chain research emphasize potential benefits from integration and collaboration among supply chain members including improved cooperation and coordination (Smith, Carroll, & Ashford, 1995), increased efficiency stemming from co-development and co-production (Ragatz, Handfield, & Petersen, 2002), innovative cost reduction strategies (Niezen, Weller, & Deringer, 2007), and greater information sharing among supply chain partners (Lee, So, & Tang, 2000). Better collaboration, in turn, contributes to greater adaptability and resilience across the supply chain (Christopher & Peck, 2004), and

* Corresponding author. Tel.: +1 210 458 5397; fax: +1 210 458 5783.
E-mail address: cynthia.lengnickhall@utsa.edu (C.A. Lengnick-Hall).
[1] Tel.: +1 210 458 7307; fax: +1 210 458 5783.
[2] Tel.: +1 210 458 7565; fax: +1 210 458 5783.

1053-4822/$ – see front matter © 2012 Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.hrmr.2012.07.002

enables an enhanced competitive action repertoire building on speed, quality, and flexibility (Niezen et al., 2007). Firms are said to have adopted a *supply chain orientation* (SCO) (Mentzer et al., 2001) when integrative and collaborative supply chain management activities are explicitly the result of an emphasis on customer focus, customer value-creation, coordinated marketing, and profit generation (Kohli & Jaworski, 1990; Narver & Slater, 1990; Slater & Narver, 1994).

Ketchen and Hult (2007) argue that effective collaborative supply chain management offers a substantial and largely untapped source of potential competitive advantage for many firms. Supply chain activities can impact a wide range of performance outcomes including return on assets, return on investment, growth, and market share (Coyle, Bardi, & Langley, 2003; Crook, Giunipero, Reus, Handfield, & Williams, 2008; Hult, Ketchen, & Arrfelt, 2007; Min et al., 2007; Slone, Mentzer, & Dittmann, 2007). Performance across the entire supply chain is expected to benefit from each member adopting a SCO and thereby working collectively (Min et al., 2007).

This evolution in supply chain management thinking has substantial implications for human resource management. Supply chain researchers are re-examining traditional jobs, roles, responsibilities, and skill requirements, within and between functional areas including marketing, logistics, operations, and procurement. They are also rethinking jobs, roles, and relationships between firms (Mentzer, Stank, & Esper, 2008). We propose that HR systems (i.e., HR architecture, principles, philosophy, policies, and programs (Arthur & Boyles, 2007; Becker & Gerhart, 1996; Lepak, Marrone, & Takeuchi, 2004; Takeuchi, Chen, & Lepak, 2009)) play a vital role as carriers of institutional themes and as mechanisms for operationalizing responsibilities and relationships within supply chains. However, crucial contingencies that shape the strategic context of supply chain relationships have not been examined from the perspective of HR systems that might be used to realize these sources of competitive advantage. While the evolution of supply chain management research has integrated management processes (e.g. resource efficiency and cost reduction) and marketing processes (e.g., customer service) into their frameworks, there appears to have been little attention to understanding how HR could influence supply chain management performance (Gowen & Tallon, 2003). We propose that a contingency perspective on SHRM (Lengnick-Hall & Lengnick-Hall, 1988; Milliman, Von Glinow, & Nathan, 1991; Wright & Snell, 1998) and HR systems is a particularly useful lens for examining this gap.

The purpose of this article is to build on the work of Schuler and MacMillan (1984), Borgatti and Li (2009), and others to create a foundation for studying SHRM and HR systems in the supply chain context. We consider important contingencies related to supply chain characteristics, incorporate emerging perspectives on supply chain relationships, and identify characteristics of HR systems that facilitate the ability to obtain strategic benefits from adopting a supply chain orientation (SCO). Our focus is on providing insight into how human resource management can contribute to achieving and leveraging the benefits from SCO.

This paper is organized as follows. First, we summarize recent research in supply chain management and explain the rationale for emphasizing SCO as a dominant theme. We then explain how HR systems might be designed to support adoption of a supply chain orientation and enable a firm to gain and sustain competitive advantage. Emphasis is placed on a contingency approach to the strength of HR systems within a supply chain. A general conceptual model, a decision tree for selecting effective strategic HRM approaches, and a set of propositions are offered to complement our discussion and guide future research and managerial practice.

2. Current themes and contingencies in supply chain management research

Supply chains have been in existence, at least in their constituent parts, as long as there has been dependence on others outside an organization for sourcing inputs, transforming them, and/or delivering output in the market exchange process. Early research in the domain enhanced the importance of – and the ability – to manage and coordinate outbound and inbound transportation and storage. The emergence of the value chain concept (Porter, 1985) expanded strategic consideration of inbound (i.e. receiving, warehousing, and inventory control of input materials) and outbound logistics (i.e. activities designed to get the finished products to customers) as primary contributors to value-creation. These primary activities, supplemented by support activities including human resource management, were identified as specific arenas in which firms could manage cost drivers and sources of differentiation to create competitive advantage. Porter's attention to the value chain gave face validity to the relevance and timeliness of managing supply chains and to the potential contribution from SHRM.

Parallel research emerged in the supply chain field highlighting the importance of a market orientation philosophy (Kohli & Jaworski, 1990; Narver & Slater, 1990). Findings suggest that firms that were able to generate market intelligence on current and future customer needs, disseminate this intelligence broadly, and respond to it effectively would achieve higher profits and customer satisfaction. In their work, Narver and Slater (Narver & Slater, 1990; Slater & Narver, 1994) highlighted the relevance of combined customer orientation, competitor orientation, and inter-functional coordination in producing superior customer value.

The combination of value-chain, market orientation, and customer value research reshaped supply chain management thinking. By the early 2000s, marketing and supply chain management synergy was widely recognized (Jüttner, Christopher, & Baker, 2007) and a shift toward SCO as a preferred approach dominated much of the research (Autry, Skinner, & Lamb, 2008; Bowersox et al., 2000; Crook et al., 2008; Jap, 1999; Lambert, García-Dastugue, & Croxton, 2008; Mentzer et al., 2008; Slone et al., 2007; Speier, Mollenkopf, & Stank, 2008). SCO is defined "*as the recognition by an organization of the systemic, strategic implications of the tactical activities involved in managing the various flows in a supply chain*" (Mentzer et al., 2001: 11). SCO means the management of a supply chain is guided by an overarching philosophy designed to create a strategic, systemic, fully synchronized, well-orchestrated and tightly-integrated supply and demand management perspective.

As an SCO orientation began to dominate the supply chain literature, dramatic shifts in supply chain management practices were predicted (Bowersox et al., 2000; Lancioni, 2000). Performance benefits of demand and supply integration became widely recognized (Jüttner et al., 2007; Mentzer et al., 2001, 2008; Walters & Rainbird, 2004) and the link between market orientation

focused supply chain management and firm performance gained empirical support (Min et al., 2007). While it is important to note that not all supply chains adopt (or should adopt) a SCO approach since it may not be effective for all competitive conditions (Rigsbee & Lengnick-Hall, 2010), we propose that those who do adopt SCO are most likely to benefit from the HR system framework discussed here. A thorough examination of the choice to adopt or not adopt an SCO orientation is beyond the scope of this paper.

We define a supply chain as "*a set of three or more entities* (*organizations or individuals*) *directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer*" (Mentzer et al., 2001:4). This definition is widely accepted by mainstream supply chain researchers and has four important implications relevant to our research framework.

One, supply chains involve multiple firms. Each of these firms can contribute various value-creating activities to the overall production and distribution process. Consequently supply chain interactions are expected to be complex, varied, and to require deliberate orchestration in order to leverage information and other resources (Niezen et al., 2007). Two, relationships among these firms can vary along multiple dimensions including rapport, bonding, breadth, and affinity (Greenhalgh, 2001). Relationships can be very tight or quite loose, coordinated or emergent, transactional or commitment-based, continuous or periodic, and one-way or reciprocal. As a result, social capital, cognitive/cultural institutional forces, and social network characteristics become crucial for crafting effective interactions (Borgatti & Li, 2009; Koulikoff-Souviron & Harrison, 2008). Research on social networks and cross-boundary relationships suggests that relationship-based coordination often contributes to effectiveness (Gittell & Weiss, 2004). Three, from the perspective of the focal firm, supply chains include both upstream (i.e., supply) and downstream (i.e., distribution) flows of products, services, information, finances, and interaction patterns. The upstream component of a supply chain begins with raw materials and the downstream component ends with the delivery of a product or service to a final customer. This creates a complicated system of information and resource flows that span time, space, and strategic interests (Ketchen & Hult, 2007). Four, this definition also provides a useful distinction between firms as the unit of analysis, and those inter- and intra-firm activities which are performed as part of the *management* of the supply chain. Supply chain management encompasses the spectrum of alternatives directed toward orchestrating intra- and inter-firm activities ranging from intermittent and transactional activities to fully integrated and synergistic relationships and does not necessarily incorporate the entire set of value-creating activities.

Supply chains differ in their level of complexity (Mentzer et al., 2001). An organization may have direct relations with some members of the supply chain (immediate suppliers and customer) and more distant, indirect relations with others (suppliers of the immediate supplier and customers of the immediate customer) leading to tiers in a supply chain structure (Lambert & Cooper, 2000). Similar to personal relationship networks, complex supply chains include both strong and weak ties, relationships that vary in terms of rapport, bonding, breadth, and affinity (Granovetter, 1973; Greenhalgh, 2001), and network characteristics such as connectedness, proximity, density, and norms of reciprocity (Brass, Galaskiewicz, Greve, & Tsai, 2004). To complicate things further, organizations may be members of multiple supply chains and play diverse roles that can change over time. Large, diversified organizations may be a customer in one supply chain, a supplier in another chain, a partner in one, and a competitor in another.

Supply chains differ in their levels of coordinated, managed activity (Mentzer et al., 2001). Relations between members of the supply chain may be highly coordinated and orchestrated with tight linkages among them (e.g. Toyota's supply chain (Liker & Choi, 2004)). Alternatively, relations between members of the supply chain may be characterized as weak ties (Granovetter, 1973) and be largely uncoordinated and unmanaged with loose linkages among them that are largely transactional in nature (e.g. catalog purchases for various office supplies). As noted previously, it is not always appropriate or cost effective to maintain close relations with all members of a supply chain (Min et al., 2007). As research on vertical integration has found, the benefits of close ties, tight coordination, and long-term commitments must be balanced against the need for strategic flexibility and the risks associated with technology change and shifting value propositions among customers (Harrigan, 1986). Research on firms that make long-term investments with a limited group of suppliers suggests the need to consider factors such as switching costs, product complexity, and purchase importance (Swink & Zsidisin, 2006).

The prevailing rationale for promoting SCO in the supply chain literature emphasizes potential performance benefits, SCO is expected to increase the probability of optimizing the outcomes of the entire chain without suboptimizing the outcomes of individual firms in the chain (Mentzer et al., 2001; 2008). However, resource dependency, strategic management, and stakeholder literatures (Barney, 1991; D'Aveni, 1994; Emerson, 1962; Freeman, 1984; Frooman, 1999; Jacobs, 1974; Pfeffer & Salancik, 1978; Porter, 1985) argue that a contingency model is more likely to be effective. A contingency perspective argues that the need for and benefits of coordination and intricate links is a function of six key factors that differentiate supply chains and the environments in which they operate: (1) *concentration* (number of alternate sources or buyers), (2) *controllability* (contractual or relationship constraints), (3) *non-mobility* (geographic or logistic constraints), (4) *non-substitutability* (few alternatives that provide the same contribution), (5) *magnitude* of the exchange (relative proportion of inputs or outputs), and (6) *criticality* of the exchange (extent to which the resource is crucial for creating value). In general, greater concentration, less controllability, increased mobility, limited substitutability, large magnitude, and high criticality provide incentives for developing systems to actively coordinate, influence, and manage those with whom the organization has resource-dependent relationships (Harrigan, 1986; Min et al., 2007; Porter, 1985). When strong and enduring forces shape the interdependencies among members of a supply chain, both the individual organizations and the entire system will benefit from cohesive and well-coordinated interactions (Gittell & Weiss, 2004; Mentzer et al., 2008; Slone et al., 2007). Consideration of these factors suggests two implications. One, an SCO approach is not always the most effective choice. Two, similar to concepts of cultural distance (Eden & Miller, 2004), perhaps it might be best to consider variation in the extent to which an SCO approach is adopted.

SCO has both intra and inter-organizational management implications. SCO benefits from a shared mindset within and across organizations (Mentzer et al., 2001; Min et al., 2007). A widespread collective perspective helps to promote institutionalized behaviors and norms through regulative, normative, and cultural-cognitive processes (Koulikoff-Souviron & Harrison, 2008). These behaviors and norms, in turn, drive cross-functional as well as inter-organizational cooperation, coordination, co-development, information sharing, adaptability, and actions that enhance the competitive repertoire among supply chain members (Mentzer et al., 2008; Smith et al., 1995). SHRM practices such as training, shaping, and reinforcing routines for organizational learning, and increasing the ability of employees to gather and interpret information from external sources have been found to be crucial links in building competitive advantages from supplier relationships (Flint, Larsson, & Gammelgaard, 2008). Activities such as these were shown to generate supply chain learning and innovation management, increase innovation, and result in higher overall organizational performance (Flint et al., 2008). These findings suggest the potential benefits of developing an HR system to support an SCO orientation.

3. Crafting an HR system to support SCO

In one of the first efforts to expand the scope of SHRM, Schuler and MacMillan (1984) explained how the HR function could be deployed to affect competitive advantage, not only in the focal organization, but in its value chain as well. Some organizations are fully vertically integrated, creating their products or providing their services from beginning to end. American Apparel, for example, which operates the largest U.S. garment factory, performs all manufacturing activities (e.g. knitting, dyeing, cutting, and sewing) and all photography, marketing, and distribution activities out of their Los Angeles facility (American Apparel, 2009). Other organizations carve out only a piece of the value chain for themselves and rely upon other firms to obtain their raw materials or to distribute their products or services. Reebok, for example, outsources all of its shoe and clothing distribution, and is reported to ship 150 million items from 35 to 40 different locations every year using a variety of logistics suppliers (Davies, 2004). As Schuler and MacMillan (1984) asserted, the chain of activities between suppliers and end users provides an organization with several potential "strategic targets" for using SHRM to create competitive advantage. Successful supply chain processes and management depend on the performance of the people within the relevant organizations (Fisher, Graham, Vachon, & Vereecke, 2010).

To be effective in creating customer value and potential competitive advantage, a supply chain must successfully address the classic management problems of differentiation and integration (Lawrence & Lorsch, 1967). Lawrence and Lorsch originally applied their concepts to an intra-organizational environment. In this paper, we extend their concepts to the inter-organizational environment. Differentiation refers to the degree to which the various departments or subunits within the organization specialize to perform different activities. In the supply chain context, differentiation refers to the degree to which various firms specialize to perform different activities in the supply chain. Integration refers to mechanisms required to ensure effective coordination of activities across, in our case, supply chain firms. The competing needs to differentiate and integrate give rise to pivotal supply chain characteristics that, in turn, carry implications for effective HR systems and strategies.

An HR system is a multilevel construct consisting of some overarching, broad elements (HR architecture, principles, and philosophy) that direct the management of human capital, some mid-range elements (HR policies and programs) that provide alternate means for aligning HR activities, and some HR practices and processes that capture the specific activities implemented within a firm (Arthur & Boyles, 2007; Becker & Gerhart, 1996; Lepak et al., 2004; Takeuchi et al., 2009). HR systems signal to employees what is expected of them, how they should interact with each other and with various stakeholders, what should be emphasized, and what will be rewarded (Bowen & Ostroff, 2004; Haggerty & Wright, 2010). When the configuration of HR principles, policies, programs, and practices is internally consistent, distinctive, well-aligned, and widely accepted, it creates a strong HR system climate in which the intended messages are understood and correctly interpreted by employees and are used to guide individual and collective behaviors (Haggerty & Wright, 2010). We propose that specific principles can provide a foundation for developing HR systems and an inter-organizational climate that enables and fosters SCO.

Our focus on the HR system and climate recognizes that specific HR programs, policies, and practices will, and should, vary across organizations and across competitive settings (Delery & Doty, 1996). Equifinality argues that these elements should be firm- or supply chain-specific and should reflect particular competitive goals, industry conditions, and contextual realities. However, the stated values, beliefs, and norms that drive employee behavior benefit from consistency across organizations and setting with regard to promoting SCO. Therefore, we propose that at the macro level, particular principles could guide the design of HR systems to contribute to SCO without overly restricting the choice of specific HR practices or programs needed to achieve different kinds of competitive advantage.

We now turn to the main focus and contribution in our paper, the HR system guiding between-firm activities and the contingencies that support achieving desired performance outcomes from adopting a supply chain orientation. First, we discuss five specific principles that we propose offer a foundation for designing an HR system that supports and leverages SCO. Next, as illustrated in Fig. 1, we describe five specific inter-organizational relationship contingencies that moderate the positive influence of an SCO-oriented HR system on organizational performance. In other words, the influence of a strong SCO-oriented HR system will be moderated by these contingent relationships characterizing the supply chain.

3.1. Principles for designing a SCO-oriented HR system

Research suggests that HR systems influence employee behaviors and attitudes along with organizational outcomes through the way in which employees interpret their work climate (Ferris et al., 1988; Schneider, Ehrhart, & Macey, 2011). Bowen and

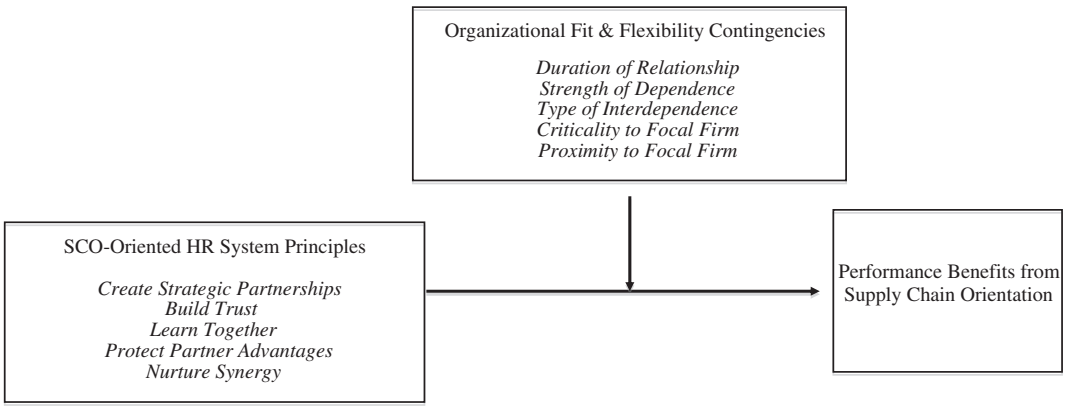

Fig. 1. Realizing SCO benefits from inter-firm HR system orientation: a contingency model.

Ostroff (2004) argue that the greater the alignment of the principles and policies governing an HR system, the more consistent the signals will be and therefore, the stronger the resulting situation or climate is likely to be. The strength of an HR system has been shown to be positively related to intended performance outcomes (Becker & Gerhart, 1996; Lepak et al., 2004). A supply chain orientation is, in essence, a work climate that is created both within and across the firms that are members of the supply chain.

Arguments supporting the benefits from SCO often emphasize competitive advantages stemming from superior competence-enhancing innovations, operational efficiency and effectiveness, and protection of strong market positions (Bowersox et al., 2000; Mentzer et al., 2001; Min et al., 2007; Porter, 1985). These benefits are most often achieved under market conditions characterized by relative environmental stability and evolutionary change. Under these conditions, supply chains are a source of reliable and ordered patterns of resource flows and exchanges that promote capability-based sources of competitive advantage (Lengnick-Hall & Wolff, 1999; Oliver, 1990). A review of the strategic management and supply chain literatures suggests that five principles are consistent with encouraging collaboration and integration among supply chain partners under these competitive conditions. We propose that these five principles are a logical foundation for a SCO-oriented HR system.

First, SCO-oriented HR systems support strategic partnerships (Hitt, Hoskisson, & Ireland, 2001). Partnerships are directed toward achieving long-term strategic objectives, gaining preferential access to desired resources, and collaborating to enhance the competitive position of member organizations (Ireland, Hitt, & Vaidyanath, 2002; Mentzer, Min, & Zacharia, 2000). In contrast to transactional relationships, a partnership orientation suppresses opportunism to enable firms to capitalize on complementary, co-dependent, firm-specific assets (Jiang, Tao, & Santoro, 2010). To do this an HR system needs to adhere to a philosophy that articulates and reinforces values of mutualism and design policies that create visible signals that the partnership is important (Johnson, 1999). It should also encourage assessment processes that focus on the long-term rather than on expedient, short-term gains (Ganesan, 1994).

Second, SCO-oriented HR systems emphasize building trust through sharing. Inter-organizational trust is based on confidence that all members of the supply chain are working toward common goals (Ring & Van de Ven, 1994) and are reliable and will fulfill their obligations (Mohr & Spekman, 1994). Inter-organizational trust is strengthened by economic integration and the degree to which pooled resources are effectively embedded in a partner's value-creating system (Luo, 2008). To do this, an HR system needs to embrace a philosophy of encouraging joint planning and risk reduction activities, transparent information sharing, and making financial investments in assets that benefit supply chain partners.

Third, SCO-oriented HR systems create and celebrate opportunities for supply chain partners to learn together. Policies that enable joint searches for new value-added activities and projects, human capital investments that develop skills for inter-organizational learning and joint exploration and exploitation contribute to developing supply chain wide absorptive capacity (Cohen & Levinthal, 1990; Crossan, Lane, & White, 1999).

Fourth, SCO-oriented HR systems promote sensitivity to protecting supply chain partner interests. An essential value that should be strongly enacted by a SCO-oriented HR system is the expectation and the norm that supply chain members have a mutual responsibility to enable and protect specialized assets, proprietary information, best practices, and other sources of competitive advantage from spillover or appropriation by other organizations. Supply chain partnerships rely on trust, consequently, HR systems are particularly helpful when they facilitate opportunities to develop long-term reciprocating and reliable interactions among firms in the supply chain network. Policies and philosophies that encourage the development of shared goals, common norms, economic integration, and foster familiarity are also beneficial.

Fifth, SCO-oriented HR systems include policies and norms that actively support supply chain synergy. Synergy requires both diversity and common objectives. Therefore, HR systems that value a wide range of differences, facilitate effective conflict resolution, encourage norms of reciprocity and communication patterns that contribute to developing healthy network relationships, and create opportunities for identifying common interests, are vital for fostering SCO behaviors and attitudes.

Actively engaging in policies, practices, programs, and activities that embody these five principles helps create an HR system designed to contribute to generating and implementing an SCO perspective within a supply chain. This leads to our first proposition.

Proposition 1. *For supply chains in which an SCO perspective is adopted by the dominant firm(s), those that enact HR systems that incorporate principles of partnership, trust through sharing, learning together, mutual protection, and synergy will outperform supply chains that do not embed these principles in their HR systems.*

3.2. Contingencies influencing HR system design

HR principles that institutionalize an SCO orientation across firms within a supply chain, therefore, are expected to generate and reinforce the expectations, behaviors, and conditions that lead to performance gains from supply chain collaboration and integration. However, the benefits of a strong HR system of this type are moderated by contingencies characterizing fit and flexibility within the supply chain. In other words, the level of SCO integration that is most appropriate or effective for a particular supply chain is a judgment call. An effective choice depends on a number of factors including the characteristics of the supply chain within the overall strategic posture of the dominant firm (Harrigan, 1986; Porter, 1985) and the requisite level of integration needed to achieve intended outcomes (Ketokivi, Schroeder, & Turkulainen, 2006). Too much integration reduces flexibility; too little reduces efficiency. The role that an HR system should play in facilitating integration also reflects a contingency perspective (Delery & Doty, 1996). HR system design should be managed strategically to fit the characteristics of the supply chain and its environment and to facilitate a firm's ability to achieve its intended outcomes.

Consistent with previous research on the contingency perspective of SHRM (Lengnick-Hall & Lengnick-Hall, 1988; Milliman et al., 1991; Wright & Snell, 1998) we argue that both fit and flexibility must be considered. HR scholars have defined *fit* as matching particular sets of HR principles, policies, or practices to specific objectives, conditions, and strategic interests. Baird and Meshoulam (1988) expanded the notion of fit to incorporate both external and internal components. External fit is aligning a firm's HR system with its strategy, whereas internal fit is aligning a firm's HR system in terms of its component parts (i.e., mutual reinforcement across the entire set of HR system components). Research shows that fit, or alignment, has been shown to be positively related to organizational performance (Cabrera & Bonache, 1999; Mesch & Perry, 1995; Milliman et al., 1991; Schuler & Jackson, 1987).

Wright and Snell (1998) defined *flexibility* as the extent to which a firm's human resources possess skills and behavioral repertoires that can give a firm options for pursuing diverse strategic alternatives in the firm's competitive environment, as well as the extent to which the necessary HR practices can be identified, developed, and implemented quickly to maximize the flexibilities inherent in those human resources. They further distinguished between *resource flexibility* (the extent to which practices or routines can be adapted and applied across a variety of situations) and the *coordination flexibility* (how quickly the practices or routines can be re-synthesized, reconfigured, and redeployed).

Wright and Snell argued that organizations should promote both fit and flexibility as they are complementary rather than orthogonal. These ideas carry important implications for supply chains. The integration and strong bonds associated with SCO reflects a tight fit within the supply chain (Martin & Grbac, 2003; Min et al., 2007). Tighter fit is more appropriate in supply chains in which relationships are long-term, there is strong sequential interdependence between actors, when supply chain members are proximate to the focal organization, and when they are crucial sources of competitive advantage. In contrast, more flexibility is appropriate in supply chains characterized by short-term relationships, lower levels of pooled or sequential interdependence, when there is greater distance from the focal organization, and when supply chain member contributions are less critical to the focal organization's competitive advantage. However, a loose fit is not conducive to developing SCO (Mentzer et al., 2001). The more turbulent and unpredictable the competitive environment is the more risks are associated with tight fit and SCO (Miles & Snow, 1984). This leads to our second proposition:

Proposition 2. *The extent to which SCO-oriented HR systems across firms in the supply chain will be positively related to high performance is contingent upon* (1) *the degree of differentiation among the supply chain partners* (2) *the degree of integration needed among supply chain partners, and* (3) *the extent to which a supply chain orientation has been adopted among a dominant proportion of supply chain partners.*

While, embedded assumptions and values within an HR system have been found to shape HR practices (Bowen & Ostroff, 2004) we do not contend that the specific HR practices across firms within a supply chain or across supply chains having a SCO will be isomorphic. Rather, we argue that the practices that are developed to meet competitive and organizational conditions will reflect a common set of principles (Colbert, 2004) consistent with SCO.

In the next section we discuss three alternative SHRM approaches for managing the way in which supply chain members might design the more micro (policy and practice) components of their HR systems. This is followed by an examination of the primary contingencies which should be considered in selecting from among these alternatives.

4. SHRM alternatives for designing inter-organizational HR practices

A stream of SHRM research that originated in the international HRM domain also has particular relevance for strategic HRM in the supply chain. Relationships between corporate and subsidiary HR practices and the dual needs of providing consistency across units while allowing for local adaptations (Bartlett & Ghoshal, 1998; Schuler, Dowling, & DeCieri, 1993) have many parallels with the relationships among firms in a supply chain. Taylor, Beechler, and Napier (1996) posited that multinational corporations can select from among three approaches to managing their affiliates: exportive, adaptive, and integrative. We believe that these same approaches are useful for describing potential HR system options for supply chain interactions.

An *exportive* approach is one in which the composite HR system of the parent organization is replicated by the affiliate. In a supply chain context, this would mean that the HR system of the dominant supply chain member would be replicated by other firms in the chain. An *adaptive* strategy is one in which the HR systems of the affiliates are designed to fit their local environment and various components or practices may have little similarity to activities in the parent organization. In a supply chain context, this means that each member would adopt HR practices that best enable their firm to contribute to the stream of activity in the supply chain as long as these practices do not contradict or undermine the actions of other firms in the chain. Stated differently, HR practices could vary widely among supply chain member organizations as long as they complied with the overall principles of an SCO HR system orientation. An *integrative* approach is one in which the transfer of HR practices flows back and forth between parent and affiliate, and affiliate to affiliate, with a goal of transferring the best practices throughout the corporation. In the supply chain context, this would mean that practices which could create synergy among supply chain members, or which could increase the effectiveness of individual partners would be widely adopted, regardless of whether they originated in dominant or less influential member organizations. Moreover, an integrative approach would allow firms to maintain unique HR practices that meet their individual needs as long as these practices did not undermine the effectiveness of other firms in the supply chain.

The particular approach that is most effective for the supply chain is largely determined by the degree to which a global or universal set of practices creates effective and efficient sources of value on the one hand, and the need to be responsive to local needs and conditions on the other (Douglas & Wind, 1987). These competing pressures influence the extent to which benefits associated with common solutions to all HR system issues contribute to effectiveness, efficiency, and coordination objectives and are a better trade-off than benefits associated with individualized solutions to local opportunities and problems.

4.1. Contingencies for selecting an effective approach to overall HR system design

Reflecting on the dynamic tension between fit and flexibility, we propose that five primary characteristics of supply chains can be used to determine which approach to designing HR systems within a supply chain is likely to be most effective. The five factors are (1) *duration* of the firm relationships in the supply chain, (2) strength of *dependence* of the firm relationships in the supply chain, (3) *type of interdependence* of the firm relationships in the supply chain, (4) *criticality* of the supply chain members' contributions to the firm's source of competitive advantage, and (5) *proximity* of the upstream or downstream firms to the focal organization. Combined, these factors determine the propensity for and the benefits of an individual firm adopting a supply chain orientation (Ketchen & Hult, 2007; Min et al., 2007), as well as the risks and benefits associated with adopting a particular approach to designing their comprehensive HR system. Moreover, if a critical mass of the firms in a supply chain experience enduring, strong, highly interdependent, crucial, and proximate relationships, it is reasonable to expect that a supply chain orientation is more likely to be adopted and institutionalized throughout the chain. Each of these factors will be discussed in turn.

The first factor is the *duration* of relationships in the supply chain. Duration is defined as the length of time relationships exist between member firms in a supply chain. Do member firms in the supply chain have primarily short- or long-term interactions? In the aerospace and defense industries, for example, aircraft manufacturers such as Lockheed-Martin and Boeing tend to have long-term relationships reflecting the time it takes to design and produce a plane and the intricate web of technologies that are involved. In the entertainment industry, in contrast, relationships are often more transactional reflecting high rates of change and innovation as well as shifting consumer preferences.

A second factor is the *strength* of dependent relationships in the supply chain. This is defined as the degree to which one firm relies upon another firm for its viability and continued success. Crucial questions surround whether member firms have a primarily strong or weak reliance on each other, whether there are alternative inputs that could be accessed, the extent of financial dependence, the availability of alternate customers that could be targeted, and the level of investment made in the relationship (e.g., specialized equipment, IS systems). Personal computer manufacturers are strongly tied to Microsoft operating systems and software applications and Microsoft applications require hardware platforms to run on. This multidimensional, mutual dependence creates shared investment and performance implications. Commodity market supply chains are often characterized by weaker dependent relationships due to substitutability.

A third factor is the *type of interdependence* captured in the supply chain. Thompson (1967) proposed three types of technologies associated with three kinds of task interdependence. In *mediating technologies* (pooled interdependence), units can work independently of one another, but the final output is a joint product of the units' accomplishments. For example, if three separate firms in a supply chain provide different components to the assembly firm, they experience pooled interdependence in terms of ultimate market performance. Modular manufacturing in the automobile industry provides an example of this type of relationship. Entire component units, such as complete door assemblies, are inserted into the assembly line (McCutcheon, 2005). Pooled interdependence requires the least amount of coordination and can usually be managed by simple rules and standardized procedures which are often captured through regulative institutionalization. In *long-linked technologies* (sequential interdependence), production involves a series of steps to be executed in a specific sequence. Each unit completes one or several of these steps and their work is primarily dependent on the immediately preceding steps in the sequence. Sequential interdependence is more complex than pooled, and often requires schedules and plans to augment rules and procedures. An integrated sequence of small firms that spin fibers, knit, dye, cut, and sew fabric is an example of sequential interdependence. Normative institutionalization (DiMaggio & Powell, 1983) is typically needed to manage sequential interdependence. In *intensive technologies*, units experience pooled, sequential, and reciprocal interdependences, making these relationships particularly challenging to manage. Reciprocal interdependence is the most complex of the three types of interdependence and requires mutual adjustment

and joint problem-solving. It generally requires regulative, normative, cultural-cognitive institutional mechanisms (DiMaggio & Powell, 1983), and relational coordination (Gittell & Weiss, 2004) to effectively manage reciprocal interdependence. For example, the intricate, multilevel relationships between firms that provide systemic IT solutions requires extensive information processing to coordinate activities characterized by uncertainty and reciprocal interdependence.

A fourth factor is the *criticality* of the supply chain members' contributions to a focal firm's source of competitive advantage. Criticality is defined as how urgently needed or absolutely necessary the contributions of another supply chain member are to the focal organization. Criticality is related to the proportion of supply chain members providing inputs that are valuable, rare, inimitable, and non-substitutable (Barney, 1991, 1995). The less feasible it is for the firm to engage in upstream or downstream activities itself to capture key sources of advantage in-house, the more critical the supply chain is for competitive performance. Criticality is directly related to the value-creating properties of the inputs and/or subsequent downstream activities of supply chain members. In 2000, Ericsson relied on a Phillips semi-conductor plant in Albuquerque, New Mexico as its sole source for radio-frequency chips. After a fire at the plant resulted in a shortage of access to the chips, months of phone production were lost. Ericsson withdrew from the mobile phone terminal business at a business interruption cost of $200 million (Norrman & Jansson, 2004). While the consequences for Ericsson were devastating, Nokia was able to survive and thrive despite its reliance on the same Phillips plant because it had designed and orchestrated fundamentally different supply chain relationships (Christopher, 2005).

A fifth factor is the *proximity* of the upstream or downstream firms to the focal organization. We draw from social network theory and define proximity as the number of firms in the sequential process between the upstream (or downstream) firm and the focal organization. This captures both relational and structural closeness within the supply chain network (Burt, 1980). Closer proximity suggests greater opportunities for interaction and exchange. The direct relationships among Toyota's Japanese plants located near Tokyo City facilitate just-in-time (JIT) manufacturing and shape the organization culture (Stewart & Raman, 2007). The more indirect and mediated connections often found in long-linked supply chains associated with construction firms makes communication and coordination more challenging.

To summarize, there are three approaches to designing SCO-oriented HR systems: (1) an exportive approach in which all of the micro and macro components of the HR system of the dominant firm are replicated by other firms in the supply chain, (2) an adaptive approach in which the principles are common across member firms but programs and practices reflect local, firm-specific conditions, and (3) an integrative approach in which the principles are common across members firms but practices can be drawn from any source based on their effectiveness. Which approach is most likely to be effective depends on the nature of the supply chain relationship in terms of relationship duration, dependency, type of interdependence, criticality, and proximity. A decision approach patterned after the familiar Vroom–Jago decision model (Vroom & Jago, 1988) for selecting appropriate decision-making styles is depicted in Fig. 2.

If the duration of the majority of supply chain relationships is short-term, an adaptive approach to designing an HR system is likely to be most effective because local adaptation and flexibility is more important than consistency across supply chain members. Even if relationships are more long-term, if the dependencies among supply chain members are *weak*, an adaptive approach is expected to be effective because capitalizing on local strengths and flexibility is more important than consistency across supply chain members. Beyond this, regardless of relationship duration or extent of dependency, if the interdependences among supply chain members are primarily pooled, an adaptive approach is more effective because flexibility and an ability to enhance and leverage local talent are more important than consistency across supply chain members. This leads to our third proposition.

Proposition 3. *An **adaptive** approach to designing HR systems is most effective if the relationship between members of the supply chain is primarily: a) short-term in duration, or b) long-term in duration but the strength of focal firm dependence on the partner is weak, or c) long-term in duration with a strong focal firm dependence on the partner, but the type of interdependence is pooled.*

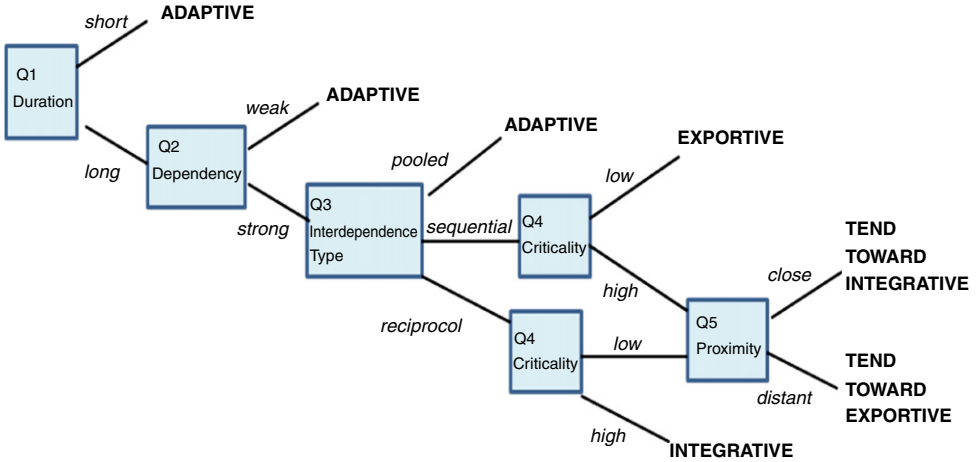

Fig. 2. Decision model for selecting effective overall HR system design for supply chain management.

If the duration of the majority of supply chain relationships is long-term, then the strength of the dependence between supply chain members becomes increasingly important to consider. As discussed, if the dependence is weak, an adaptive approach is most effective but if the dependence is strong then the nature of the interdependence influences what approach is more effective. Strong dependence is likely if the focal company is a supplier's largest customer or if the focal organization is dependent on a supplier for the largest proportion of its resources. If the activities of supply chain member firms are sequentially interdependent and the member's contribution to the value chain is critical, then an exportive approach is expected to be most effective, even if the two organizations are not proximate. However, if the interdependence is reciprocal and the member's contribution is critical, then an integrative approach is expected to yield the best outcomes when the two organizations are close. On the other hand, if the interdependence is reciprocal, but the contribution is more tangential, the trade-offs of adopting an exportive versus an integrative approach are more complicated and less tangible. Conditions of sequential interdependence coupled with high criticality and conditions of reciprocal interdependence coupled with low criticality require firm-specific judgment assessing costs and benefits associated with the difficulty, feasibility, and rewards for exportive versus integrative approaches. When *proximity* is *close*, costs of an integrative approach are reduced and the feasibility is enhanced, increasing the benefits of an integrative approach. When *proximity* is *distant*, an exportive approach is typically more cost effective and more feasible. Unless the two organizations are proximate, thereby facilitating communication and negotiation, an exportive approach is most likely to have the positive results. This leads to our next two propositions:

Proposition 4. *An **exportive** approach to designing HR systems is most effective if the relationship is long-term, the dependence is strong, and interdependence is sequential and (a) criticality is low to modest, or (b) criticality is high but the organizations are not proximate.*

Proposition 5. *An **integrative** approach to designing HR systems is most effective if the relationship is long-term, the dependence is strong, and interdependence is reciprocal and (a) criticality is high, or (b) criticality is modest but close proximity of the organizations support the benefits of an integrative approach.*

5. Discussion and conclusions

To recap our framework for HR system design and supply chain orientation, we argue that firms with a supply chain orientation will increase organizational (and supply chain) performance if they enable an effective blend of alignment and flexibility among their HR systems. Fit, or alignment, in this context involves adjusting the design of human resource systems to reflect five characteristics of the supply chain (relationship duration, strength of dependence, type of interdependence, criticality, and proximity). Flexibility in this context involves how tightly or loosely coupled the human resource systems are among supply chain member firms (Orton & Weick, 1990) as identified by particular strategic approaches (exportive, adaptive, and integrative).

The contingent relationships discussed in the prior section outline the tradeoffs associated with designing universal HR systems for the supply chain or designing HR systems to meet the firm-specific conditions of each supply chain member organization. We argue for the benefits of having a common set of HR system principles to promote a SCO orientation, but explain why and how HR programs and practices would be expected to vary within a SCO-oriented HR system. When relationships are relatively temporary, as is the case with purchases that are not expected to be repeated, pressures toward responsiveness to local conditions and firm-specific strategies outweigh the benefits of coordination or firm-to-firm similarities in HR practices. The short-term duration of such relationships makes it difficult to establish any coordination and integration across firms. Consequently, the requisite level of integration among firms is negligible. In this situation, there are limited benefits from orchestrating HR practices for system-wide consistency. That is, firms would be loosely coupled, yielding greater flexibility for individual firms to tailor their own HR practices to their own unique needs. At most, supply chain members would share HR knowledge that would allow each firm to make individual choices on how best to adapt to their local environments (e.g. a one-time purchase for use in a foreign country). Under these conditions, SCO would highlight cooperation and coordination rather than consistency. Co-production would be minimized, but information sharing would be high to enable mutual adjustment to complex conditions, and diversity would be encouraged to enhance the overall competitive repertoire.

Under conditions favoring an exportive approach, designing HR systems is akin to extending the boundaries of the focal organization to include the boundaries of the upstream or downstream firms. This allows focal firms to gain the competitive advantages posited by Schuler and MacMillan (1984) from advising and assisting suppliers, customers, or service/distributors on effective HR practices. That is, replicating HR systems from the focal organization to the upstream or downstream firms in the supply chain provides the best fit. The relationships between a group of small firms that have supplied component modules (e.g., dashboard assemblies, radio/CD components, and transmission gears) exclusively to a powerful automotive manufacturer (the focal firm) for many years would likely benefit from leveraging the entire HR system across the members of the supply chain. The long-term duration of the relationship and close ties of the organizations provides the opportunity to benefit from the consistency offered by HR systems of the focal organization. In this situation, members of the supply chain would do much to coordinate HR practices for system-wide consistency. That is, activities would be tightly coupled, yielding greater fit among HR practices throughout the supply chain. Some core HR practices such as selection, training, and performance management might be implemented consistently across firms in the supply chain. Competitive advantage would be gained through the systemic benefits of shared HR practices that improve overall supply chain performance. In addition, much like global international strategies, an exportive orientation enables efficiencies and economies of scale that are not available through firm-specific

approaches. Under these conditions, SCO would derive the foundations of cooperation and coordination from the needs of the dominant firm in the chain, co-production would be common, information sharing would be high to improve control of the system, and common interests would be encouraged and lead to institutionalized norms.

Under conditions favoring an integrative approach, transferring HR practices back and forth between firms in the supply chain results in positive performance outcomes. An example of this might be found in the health care industry where physicians, surgical hospitals, outpatient clinics, post-operative physical therapy facilities, and many other ancillary units work together, sometimes as partners, to develop integrated solutions for continuing patient care. The long-term duration of the relationship, close ties of the organizations, and reciprocal interdependence provides the opportunity for mutual sharing of best HR practices between organizations. In this situation, members of the supply chain would do much to coordinate HR practices for system-wide consistency. That is, they would be tightly coupled, yet no single firm would have a monopoly on determining the best HR practices. Instead, for example, some firms in the supply chain might have superior training systems, while others may have designed more efficient and valid selection systems. Cross-fertilization of HR practices among member firms yields greater overall systemic benefits. Similar to transnational strategies, an integrative approach to HR system design in the supply chain enables the entire network to benefit from sharing best practices regardless of their origin. Under these conditions, SCO would highlight cooperation and coordination based on the strategic outcomes that are most important to achieve. Co-production and co-development would be used when efficiency gains can be realized. Information sharing would be high to enable effective decision making and accurate comparisons across HR practices adopted by different members of the supply chain. Diversity would be leveraged to enhance the competitive repertoire.

5.1. Conclusions

This framework contributes to the strategic human resource management and supply chain literatures in several ways. First, we highlight a neglected intersection between these two streams of research to provide strategies for resolving complex management challenges and capitalizing on the competitive opportunities created by these cross-boundary relationships. Social network research and consideration of relational coordination mechanisms suggest that HR systems can make substantial contributions to a firm's ability to implement SCO and to realize the benefits of this orientation (Brass et al., 2004; Gittell & Weiss, 2004). This can be achieved by designing HR systems to create strategic partnerships, build trust, learn jointly, protect partner advantages, and nurture synergy.

Second, we contribute to efforts to expand the boundary conditions of strategic human resource management from a primarily single organization intra-organizational focus to one which includes both intra- and inter-organizational relationships. This augments the potential contribution of SHRM to a firm's competitive position and incorporates an extended array of human talent to be deployed toward successful organizational activities. Third, we identify five important contingencies related to effective choices in terms of fit versus flexibility within a supply chain. These contingencies provide a framework that helps HR professionals select an appropriate SHRM approach to adopt in the supply chain management activities. Fourth, we integrate previous theorizing in strategic human resource management and provide a conceptual framework and decision model designed to facilitate research in the supply chain context. This decision tree offers a concrete, testable model for comparing differences among supply chains and examining conditions under which SCO and a tight, collaborative fit among organizations and across HR practices leads to high performance and conditions under which SCO and loosely connected HR practices are more effective. Within this framework we identify specific ways in which SHRM practices can contribute to creating and capitalizing on a supply chain orientation to achieve strategic benefits. Finally, we offer six testable propositions that serve to begin an agenda for future research.

The ideas presented in this paper also have several important implications for managerial practice. First, by adopting a contingency perspective, we identify the conditions that should shape the extent to which efforts are made to achieve fit versus flexibility across SHRM practices to support a supply chain orientation. The choice of whether to adopt exportive, adaptive, or integrative approaches to orchestrate HR practices across supply chain partners is crucial and, to date, the question has remained largely unexamined. Our proposed decision model both provides guidance to practitioners and a rationale for decision making. Second, a clear understanding of strategic objectives and the type of HR activities that are particularly important to realizing supply chain orientation driven firm performance outcomes is an essential ingredient for effective intra-firm and inter-firm strategic human resource management practice. A greater understanding of the various contingent conditions driving these outcomes is an important first step in taking effective action.

Supply chains offer the potential for achieving multifaceted value creation (Bowersox et al., 2000) at a profit (Min et al., 2007). Recent supply chain management research has moved toward a cross-disciplinary perspective to understanding the various factors that enable this goal to be realized. This approach provides a foundation for defining and examining supply chain management concepts from a variety of levels and vantage points. The resulting research has increased understanding of the relationships among supply chain members, supply chain management, and corporate and business strategy, and helps explain why some firms are more successful than others in managing their supply chains for competitive advantage. We contribute to this cross-disciplinary approach, synthesizing literatures in supply chain management, organization theory, strategic management, and strategic human resource management to identify areas of inter-firm SHRM practice that are pivotal. We encourage researchers in SHRM to focus their efforts on this important topic yielding a greater understanding of the role of human resources in achieving supply chain management related competitive advantages.

References

American Apparel (2009). Company profile. Accessed on December 13, 2009 at http://www.americanapparel.net/contact/profile.html

Arthur, J. B., & Boyles, T. (2007). Validating the human resource system structure: A levels-based strategic HRM approach. *Human Resource Management Review*, *17*, 77–92.

Autry, C. W., Skinner, L. R., & Lamb, C. W. (2008). Interorganizational citizenship behaviors: An empirical study. *Journal of Business Logistics*, *29*, 53–74.

Baird, L., & Meshoulam, I. (1988). Managing two fits of strategic human resource management. *Academy of Management Review*, *13*, 116–129.

Barney, J. B. (1986). Types of competition and the theory of strategy: Toward an integrative framework. *Academy of Management Review*, *11*, 791–800.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*, 99–120.

Barney, J. B. (1995). Looking inside for competitive advantage. *The Academy of Management Executive*, *9*, 49–60.

Bartlett, C. A., & Ghoshal, S. (1998). *Managing across borders: The transnational solution* (2nd ed.). Boston, MA: Harvard Business School Press.

Becker, B., & Gerhart, B. (1996). The impact of human resource management on organizational performance: Progress and prospects. *Academy of Management Journal*, *39*(4), 779–801.

Borgatti, S. P., & Li, X. (2009). On social network analysis in a supply chain context. *Journal of Supply Chain Management*, *45*(2), 5–23.

Bowen, D. E., & Ostroff, C. (2004). Understanding HRM-firm performance linkages: The role of the "strength" of the HRM system. *Academy of Management Review*, *29*(2), 203–221.

Bowersox, D. J., Closs, D. J., & Stank, T. P. (2000). Ten mega-trends that will revolutionize supply chain logistics. *Journal of Business Logistics*, *21*, 1–15.

Brass, D. J., Galaskiewicz, J., Greve, H. R., & Tsai, W. (2004). Taking stock of networks and organizations: A multilevel perspective. *Academy of Management Journal*, *47*, 795–817.

Burt, R. S. (1980). Models of network structure. *Annual Review of Sociology*, *6*, 79–141.

Cabrera, E. F., & Bonache, J. (1999). An expert HR system for aligning organizational culture and strategy. *Human Resource Planning*, *22*(1), 51–60.

Christopher, M. (2005). *Logistics and supply chain management* (3rd edition). London, UK: Financial Times/Prentice-Hall.

Christopher, M., & Peck, H. (2004). Building the resilient supply chain. *International Journal of Logistics Management*, *15*, 1–14.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, *35*(1), 128–152.

Colbert, B. (2004). The complex resource-based view: Implications for theory and practice in strategic human resource management. *Academy of Management Review*, *29*(3), 341–358.

Coyle, J. J., Bardi, E. J., & Langley, C. J., Jr. (2003). *The management of business logistics* (7th edition). Mason, Ohio: South-Western-Thompson Learning.

Crook, T. R., Giunipero, L., Reus, T. H., Handfield, R., & Williams, S. K. (2008). Antecedents and outcomes of supply chain effectiveness: An exploratory investigation. *Journal of Managerial Issues*, *20*, 161–177.

Crossan, M. M., Lane, H. W., & White, R. E. (1999). An organizational learning framework: From intuition to institution. *Academy of Management Review*, *24*(3), 522–537.

D'Aveni, R. (1994). *Hypercompetition.* New York: Free Press.

Davies, C. (2004). Getting the most out of your distribution people. *Supply Chain Europe*, *13*, 43.

Delery, J. E., & Doty, D. H. (1996). Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions. *Academy of Management Journal*, *39*, 802–835.

DiMaggio, P. J., & Powell, W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, *48*(1), 147–160.

Douglas, S. P., & Wind, Y. (1987). The myth of globalization. *Columbia Journal of World Business*, *22*, 19–20.

Eden, L., & Miller, S. R. (2004). Distance matters: Liability of foreignness, institutional distance and ownership strategy. In M. A. Hitt & J.L. Cheng (Eds.), *The evolving theory of the multinational firm. Advances in international management*, *Vol. 16*, Amsterdam: Elsevier.

Emerson, R. M. (1962). Power-dependence relations. *American Sociological Review*, *27*, 31–41.

Ferris, G. R., Arthur, M. M., Berkson, H. M., Kaplan, D. M., Harrell-Cook, G., & Frink, D. D. (1988). Toward a social context theory of the human resource management–organization effectiveness relationship. *Human Resource Management Review*, *8*, 235–264.

Fisher, S. L., Graham, M. E., Vachon, S., & Vereecke, A. (2010). Don't miss the boat: Research on HRM and supply chains. *Human Resource Management*, *49*(5), 813–828.

Flint, D. J., Larsson, E., & Gammelgaard, B. (2008). Exploring processes for customer value insights, supply chain learning and innovation: An international study. *Journal of Business Logistics*, *29*, 257–281.

Freeman, R. E. (1984). *Strategic management: A stakeholder approach.* Boston: Pitman Publishing.

Frooman, J. (1999). Stakeholder influence strategies. *Academy of Management Review*, *24*, 191–205.

Ganesan, S. (1994). Determinants of long-term orientation in buyer–seller relationships. *Journal of Marketing*, *58*(2), 1–19.

Gittell, J. H., & Weiss, L. (2004). Coordination networks within and across organizations: A multi-level framework. *Journal of Management Studies*, *41*(4), 127–153.

Gowen, C. R., III, & Tallon, W. J. (2003). Enhancing supply chain practices through human resource management. *The Journal of Management Development*, *22*, 32–44.

Granovetter, M. (1973). The strength of weak ties. *The American Journal of Sociology*, *78*, 1260–1380.

Greenhalgh, L. (2001). *Managing strategic relationships: The key to business success.* New York: Free Press.

Haggerty, J. J., & Wright, P. M. (2010). Strong situations and firm performance: A proposed re-conceptualization of the role of the HR function. In A. J. Wilkinson, N. A. Bacon, T. Redman, & S. A. Snell (Eds.), *The Sage handbook of human resource management* (pp. 100–114). Thousand Oaks, CA: Sage.

Harrigan, K. R. (1986). Matching vertical integration strategies to competitive conditions. *Strategic Management Journal*, *7*, 535–555.

Hitt, M. A., Hoskisson, R. E., & Ireland, D. R. (2001). Resource complementarity in business combinations: Extending the logic to organizational alliances. *Journal of Management*, *27*(6), 679–690.

Hult, G. T. M., Ketchen, D. J., Jr., & Arrfelt, M. (2007). Strategic supply chain management: Improving performance through a culture of competitiveness and knowledge development. *Strategic Management Journal*, *28*, 1035–1052.

Ireland, R. D., Hitt, M. A., & Vaidyanath, D. (2002). Alliance management as a source of competitive advantage. *Journal of Management*, *28*(3), 413–446.

Jacobs, D. (1974). Dependency and vulnerability: An exchange approach to the control of organizations. *Administrative Science Quarterly*, *19*, 45–59.

Jap, S. D. (1999). Pie-expansion efforts: Collaboration processes in buyer–supplier relationships. *Journal of Marketing Research*, *36*, 461–475.

Jiang, R. J., Tao, Q. T., & Santoro, M. D. (2010). Alliance portfolio diversity and firm performance. *Strategic Management Journal*, *31*(10), 1136–1144.

Johnson, J. L. (1999). Strategic integration in industrial distribution channels: Managing the interfirm relationship as a strategic asset. *Journal of the Academy of Marketing Science*, *27*(1), 4–18.

Jüttner, U., Christopher, M., & Baker, S. (2007). Demand chain management-integrating marketing and supply chain management. *Industrial Marketing Management*, *36*, 377–392.

Ketchen, D. J., Jr., & Hult, G. T. M. (2007). Bridging organization theory and supply chain management: The case of best value supply chains. *Journal of Operations Management*, *25*, 573–580.

Ketokivi, M., Schroeder, R., & Turkulainen, V. (2006). *Organizations and differentiation: A new look at an old theory*. Working Paper No. 2006/2 Espoo, Finland. Accessed at http://209.85.173.132/search?q=cache:eK4taS7sZ3AJ:www.tuta.hut.fi/library/working_paper/pdf/Ketokivi_et_al_2006.pdf+differentiation+and+integration+lawrence&hl=en&ct=clnk&cd=4&gl=us on January 15, 2009

Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: The construct, research propositions, and managerial implications. *Journal of Marketing*, *54*, 1–18.

Koulikoff-Souviron, M., & Harrison, A. (2008). Interdependent supply relationships as institutions: The role of HR practices. *International Journal of Operations & Production Management*, *28*, 412–432.

Lambert, D. M., & Cooper, M. C. (2000). Issues in supply chain management. *Industrial Marketing Management*, *29*, 65–83.

Lambert, D. M., García-Dastugue, S. J., & Croxton, K. L. (2008). The role of logistics managers in the cross-functional implementation of supply chain management. *Journal of Business Logistics*, *29*, 113–132.
Lancioni, R. A. (2000). New developments in supply chain management for the millennium. *Industrial Marketing Management*, *29*, 1–6.
Lawrence, P. R., & Lorsch, J. W. (1967). Differentiation and integration in complex organizations. *Administrative Science Quarterly*, *12*, 1–47.
Lee, H. L., So, K. C., & Tang, C. S. (2000). The value of information sharing in a two-level supply chain. *Management Science*, *46*, 626–643.
Lengnick-Hall, C. A., & Lengnick-Hall, M. L. (1988). Strategic human resources management: A review of the literature and a proposed typology. *Academy of Management Review*, *13*, 454–470.
Lengnick-Hall, M. L., & Lengnick-Hall, C. A. (1999). Expanding customer orientation in the HR function. *Human Resource Management*, *38*, 201–214.
Lengnick-Hall, M. L., Lengnick-Hall, C. A., Andrade, L., & Drake, B. (2009). Strategic human resource management: The evolution of the field. *Human Resource Management Review*, *19*, 64–85.
Lengnick-Hall, C. A., & Wolff, J. A. (1999). Similarities and contradictions in the core logic of three strategy research streams. *Strategic Management Journal*, *20*(12), 1109–1132.
Lepak, D. P., Marrone, J. A., & Takeuchi, R. (2004). The relativity of HR systems: Conceptualizing the impact of desired employee contributions and HR philosophy. *International Journal of Technology Management*, *27*(6/7), 639–655.
Liker, J. K., & Choi, T. Y. (2004). Building deep supplier relationships. *Harvard Business Review*, *82*(12), 104–113.
Luo, Y. (2008). Structuring interorganizational cooperation: The role of economic integration in strategic alliances. *Strategic Management Journal*, *29*(6), 617–637.
Martin, J. H., & Grbac, B. (2003). Using supply chain management to leverage a firm's market orientation. *Industrial Marketing Management*, *32*, 25–38.
McCutcheon, D. (2005). Modular manufacturing. *Automotive Manufacturing Solutions*, 52–53.
Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, C. D., et al. (2001). Defining supply chain management. *Journal of Business Logistics*, *22*, 1–25.
Mentzer, J. T., Min, S., & Zacharia, Z. G. (2000). The nature of interfirm partnering in supply chain management. *Journal of Retailing*, *76*, 549–568.
Mentzer, J. T., Stank, T. P., & Esper, T. L. (2008). Supply chain management and its relationship to logistics, marketing, production, and operations management. *Journal of Business Logistics*, *29*, 31–46.
Mesch, D., & Perry, J. (1995). Bureaucratic and strategic human resource management: An empirical comparison in the federal government. *Journal of Public Administration Research & Theory (Transaction)*, *5*(4), 385–402.
Miles, R. E., & Snow, C. C. (1984). Fit, failure and the hall of fame. *California Management Review*, *26*, 10–39.
Milliman, J., Von Glinow, M. A., & Nathan, M. (1991). Organizational life cycles and strategic international human resource management in multinational companies: Implications for congruence theory. *Academy of Management Review*, *16*, 318–339.
Min, S., Mentzer, J. T., & Ladd, R. T. (2007). A market orientation in supply chain management. *Journal of the Academy of Marketing Science*, *35*, 507–522.
Mohr, J., & Spekman, R. (1994). Characteristics of partnership success: Partnership attributes, communication behavior, and conflict resolution techniques. *Strategic Management Journal*, *15*(2), 135–152.
Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, *54*(4), 20–35.
Niezen, C., Weller, W., & Deringer, H. (2007). Strategic supply management. *MIT Sloan Management Review*, *48*, 7.
Norrman, A., & Jansson, U. (2004). Ericsson's proactive supply chain risk management approach after a serious sub-supplier accident. *International Journal of Physical Distribution and Logistics Management*, *34*, 434–456.
Oliver, C. (1990). Determinants of interorganizational relationships: Integration and future directions. *Academy of Management Review*, *15*(2), 241–265.
Orton, J. D., & Weick, K. E. (1990). Loosely coupled systems: A reconceptualization. *Academy of Management Review*, *15*, 203–223.
Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations.* New York: Harper & Row.
Porter, M. E. (1985). *Competitive advantage.* New York: Free Press.
Ragatz, G. L., Handfield, R. B., & Petersen, K. J. (2002). Benefits associated with supplier integration in new product development under conditions of environmental uncertainty. *Journal of Business Research*, *55*, 389–400.
Rigsbee C.M., & Lengnick-Hall C.A. (2010). Three core strategy logic perspectives on supply chain management. Paper presented at the annual meeting of the Academy of Management, Montreal, Canada.
Ring, P. S., & Van de Ven, A. H. (1994). Developmental processes of cooperative interorganizational relationships. *Academy of Management Review*, *19*(1), 90–118.
Schneider, B., Ehrhart, M. G., & Macey, W. H. (2011). Perspectives on organizational climate and culture. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology. Building and developing the organization*, *Vol 1.* (pp. 373–414) Washington, D.C.: American Psychological Association.
Schuler, R. S., Dowling, P. J., & DeCieri, H. (1993). An integrative framework of strategic international human resource management. *International Journal of Human Resource Management*, *4*, 717–764.
Schuler, R. S., & Jackson, S. E. (1987). Linking competitive strategies with human resource management practices. *The Academy of Management Executive*, *1*(3), 207–219.
Schuler, R. S., & MacMillan, I. C. (1984). Gaining competitive advantage through human resource management practices. *Human Resource Management*, *23*, 241–256.
Slater, S. F., & Narver, J. C. (1994). Market orientation, customer value, and superior performance. *Business Horizons*, *37*, 22–28.
Slone, R. E., Mentzer, J. T., & Dittmann, J. P. (2007). Are you the weakest link in your company's supply chain? *Harvard Business Review*, *85*, 116–127.
Smith, K. G., Carroll, S. J., & Ashford, S. J. (1995). Intra- and interorganizational cooperation: Toward a research agenda. *Academy of Management Journal*, *38*, 7–23.
Speier, C., Mollenkopf, D., & Stank, T. P. (2008). The role of information integration in facilitating 21st century supply chains: A theory-based perspective. *Transportation Journal*, *47*, 21–38.
Stewart, T. A., & Raman, A. P. (2007). Lessons from Toyota's long drive. *Harvard Business Review*, *85*(7/8), 74–83.
Swink, M., & Zsidisin, G. (2006). On the benefits of focused commitment to suppliers. *International Journal of Production Research*, *20*, 4223–4240.
Takeuchi, R., Chen, G., & Lepak, D. P. (2009). Through the looking glass of a social system: Cross-level effects of high performance work systems on employee attitudes. *Personnel Psychology*, *62*(1), 1–29.
Taylor, S., Beechler, S., & Napier, N. (1996). Toward an integrative model of international strategic human resource management. *Academy of Management Review*, *21*, 959–986.
Thompson, J. D. (1967). *Organizations in action: Social science bases of administrative theory.* New York: McGraw-Hill.
Vroom, V. H., & Jago, A. G. (1988). *The new leadership: Managing participation in organizations.* Englewood Cliffs: Prentice-Hall.
Walters, D., & Rainbird, M. (2004). The demand chain as an integral component of the value chain. *Journal of Consumer Marketing*, *21*(7), 465–475.
Wright, P. M., & McMahan, G. (1992). Theoretical perspectives for strategic human resource management. *Journal of Management*, *18*, 295–320.
Wright, P. M., & Snell, S. A. (1998). Toward a unifying framework for exploring fit and flexibility in strategic human resource management. *Academy of Management Review*, *23*, 756–777.