

**BUILDING STRATEGIC CHANGE CAPABILITIES THROUGH
CREATING ORGANIZATIONAL KNOWLEDGE: AN EMPIRICAL
MIX-METHODS STUDY OF A FINANCIAL SERVICE EXAMINING
THE REFLECTIVE PRACTICES OF THEIR LEADERSHIP TEAM.**

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ABSTRACT

This paper reports empirical results from a case study (Yin, 2003) in the financial services industry with a U.S.-based firm undergoing strategic change through mergers/acquisitions and restructuring in an attempt to reposition itself within a rapidly changing industry in the period 1998-2000. The study sought to understand the dynamic social process of creating organizational knowledge during strategic transformational change through understanding the nature of a firm's knowledge structure concerning organizational change. To best understand firm's social processes involved in the multi-dimensions of knowledge (Garud, 1997; Nicholls-Nixon, 1997), know *what, where, when, why, and how to change*, the researchers used mixed methodologies (Green, Caracelli, Graham, 1989) to gather real-time data to include qualitative and quantitative strategies such as: focus group storyboarding (Appendix A) using emerging pragmatic theory with informed sources who had both strategic and operational perspectives of the firm; interviews with top management team members; observations of planning meetings and daily routines; document review of stated strategic direction and transformational effort plans; and an organizational learning survey using a cross-section representation. The findings from this study contribute to our conceptual development about knowledge creation processes and necessitate some reflection on the existing theories and models relative to change and to collective cognition in three areas: (1) need for non-linear living systems approach to change, with consideration for a dualistic approach such as viewing living social systems as both open-closed, viewing organizational routines as both a source for stability-change, and viewing the need for both learning and performing actions for enduring deep-level transformation; (2) integration of reflective practitioner (Schon, 1978) with change models and other knowledge-creating processes that can be leveraged by leadership teams; and (3) recognizing the role of history, identity, and memory in sensemaking process that inhibits or enables creation of organizational knowledge.

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1 INTRODUCTION

In a world obsessed with speed, short cycle times, and a rapidly changing market, firms are looking to develop new knowledge as a transformational strategy for sustained competitive advantage (Jackson, Hitt, DeNisi, 2003; Argote, McEvily, Reagans, 2003; Easterby-Smith & Lyles 2003; Hargadon & Fanelli, 2002; Davenport & Prusak, 1998; Drazin & Schoonhoven, 1996; Tsoukas, 1996; Quinn, 1992; Drucker, 1991; Toffler, 1990). Experts believe that “today more than ever, an organization’s success hinges on its ability to create and share knowledge effectively and efficiently” (Abrams, Cross, Lesser, Levin, 2003, p.64).

Although many management theories have pointed to the importance of knowledge in the coming era (Argote et al., 2003; Drucker, 1993), few studies explain how knowledge is socially created by the collective (Abrams et al., 2003; Nonaka, 1994). And while recent research has examined members’ knowledge structures during a change initiative (Kuhn & Corman, 2003), the method involved uses aggregating individual-level interviews to represent the collective rather than firm-level or cross-level research that demonstrates the reciprocal relationship between cognition at different levels of analysis (Schneider & Angelmar, 1993). Uncertainty exists about dimensions of and processes for the creation of organizational-level knowledge (Garud, 1997; Nicholls-Nixon, 1997b), the role of existing knowledge (Brockman & Morgan, 2003), organizational defensive routines and/or cultural influences central to knowledge creation (DeLong & Fahey, 2000; Gieskes & Hyland, 2003), and the dual perspectives of knowledge as both a source and constraint for change (Hargadon & Fanelli, 2002). Additionally, as firms undergo change, they often lack a framework that allows the collective to understand how, when, where, and why they need to change in order to meet the changes in their external environment. And although theories assert that the creation of new organizational knowledge is a prerequisite for change (Hedberg, 1981; Lundberg, 1989; Nonaka, 1991; Schwandt, 1997), no comprehensive approach exists that examines the social process involved and the links between the altering of prevailing cultural assumptions (Gersick, 1989) and patterns of human actions (Schwandt, 1997).

The creation of new organizational knowledge has become a managerial priority and is considered the basis for renewal and sustained competitive advantage (Argote et al., 2003; Huysman & Dewitt, 2003; Tsai, 2002; Alderbesti, 2002; Nonaka & Teeche, 2001; Carneiro, 2000; Inkpen & Dinur, 1998; Spender, 1996; Prahalad & Hamel, 1994). And, if organizational transformation is dependent upon the ability to create new knowledge (Schwandt, 1997; Schwandt & Gundlach, 1992; Nonaka, 1991; Lundberg, 1989; Hedberg, 1981), understanding the actions and conditions that enable such creation is critical. Additionally, understanding the knowledge structures that govern interpretation and action becomes essential to include in an investigation of the knowledge-creating process of firms undergoing transformational change.

This study seeks to understand the dynamic social process of creating organizational knowledge during transformational change by investigating the nature of a firm’s knowledge structure concerning organizational change. A firm-level “knowledge structure” represents the social collective’s commonly held ideas that define expected relationships, behaviors, and actions for organizational members (Argyris & Schön, 1978), and in turn affect the strategic choices the firm makes within its changing competitive landscape.

Knowledge structures are broader than dominant logic (Snyder, 1996), yet narrower than culture (Lyles & Schwenk, 1992), and they differ from personal schema in that they are socially created and rely on consensus agreement (Daft & Weick, 1984). “Organizational knowledge” is defined as new information that has become valued through a dynamic social process, integrated into the firm’s actions and assumptions, and linked to the firm’s goal orientation.

The study investigates the knowledge-creating process contained within a firm’s knowledge structure by examining current organizational practices and underlying assumptions associated with (a) how a firm interacts with and understands changes in its external environment; (b) how a firm reflects upon its strategic goals and actions; (c) how a firm is structured to coordinate activity and share information and knowledge about changes in the environment and its change process; and (d) how a firm’s culture affects how the collective understands when, how, and why it needs to change. The primary focus is to understand the dynamic interplay between the social actions and the knowledge structures that guide these actions relative to the nature of the organizational knowledge that is created about the transformation process. The study offers alternative distinctions between individual and collective knowledge by focusing on the ongoing recursive interaction and duality of knowledge and action. This may provide practical insights into why a firm is able to sustain a deep-level change versus merely altering its daily activities temporarily. The study may offer insights into the link between knowledge and action as it relates to enhancing a firm’s agility in a rapidly changing market.

Although the creation of new organizational knowledge is seen as critical to a firm’s success, few strategic management scholars incorporate a knowledge-creating process in their models. For example, scholars argue that change is dependent upon the capacity to create new knowledge (Hedberg, 1981; Lundberg, 1989; Nonaka, 1991; Schwandt, 1997), yet the predominant models of organizational transformation (Gersick, 1991; Miller & Friesen, 1980; Tushman & Romanelli, 1985) do not explicitly identify knowledge creation in their domains of organizational activity. If the capacity to create new organizational knowledge is important to a firm’s survival and core competencies (Prahalad & Hamel, 1990), then a richer understanding of knowledge creation as an organizational activity is needed. This perspective focuses on the dynamic process between the social and cultural exchanges and simultaneity of firm-creating knowledge about its change process while performing in order to meet the complexities it faces (Schwandt & Marquardt, 1999b).

To best understand how a firm knows what, where, when, why, and how to change, researchers need to use mixed methodologies with real-time data that allow for the examination of the exchange between knowledge and action in a firm undergoing a transformational change effort. Yet, most designs either examine the performance relative to change through quantitative measures or examine the collective sense making relative to change through qualitative methodologies, often using historical data. There is a lack of research designs that incorporate an examination of both the actions of the firm and the knowledge structures during a transformational change process. If collectives are governed by knowledge structures (Prahalad & Hamel, 1986; Walsh, 1995), then the issue is how to examine the structural, cultural, and social embeddedness indicative of knowledge structures, as well as the actions that maintain and reinforce these basic assumptions. In other words, given that firms depend on creating organizational knowledge, it becomes essential to understand the type of information obtained, the structures that enable sharing

within the system, and the norms and values that guide interpretation and action. Although empirical work demonstrated how changes in knowledge structures enabled long-term survivability (Barr, Simpert, & Huff, 1992; Fahey & Narayanan, 1989), little is known about how to change knowledge structures or how to examine the dynamic exchange between knowledge structures and action as a firm seeks to understand when, how, and why it should transform itself to meet its changing environment. Further, the field lacks empirical work using real-time data with both quantitative and qualitative methods during a transformational change effort.

Finally, there is a gap between theoretical developments and practical application of knowledge creation models. Initially, firms opted for the technology without considering the social process that underpinned the creation of knowledge by the collective. Evidence of this was the investment of billions of dollars into knowledge management systems that rarely had intended impact and resulted in mammoth portion databases that were often underutilized as employees were more likely to turn to colleagues than to impersonal sources for necessary knowledge (Linden, et.al. 2002). Additionally, the focus on process management activities to increase productivity and efficiencies have limited firms' capabilities and triggered an internal bias for certainty, predictable results, and knowledge for exploitation rather than an emphasis on exploration or creation of new knowledge (Brenner & Tushman, 2003). The field lacks terms that resonate with managers, as well as models and processes that enable managers to understand the social dynamics involved at the collective level for creating organizational knowledge. Managers are faced with complex and ambiguous information worlds (Mezias & Starbuck, 2003; Walsh, 1995; Starbuck & Milliken, 1988; Schwenk, 1981; Mason & Mitroff, 1981; Mintzberg et al., 1976) and are looking for more sophisticated models, concepts, and processes to match these complexities and to provide insight into how they can create, manage, and leverage the organizational knowledge needed to navigate the chaotic environment.

To address these gaps, this study focused on the process of creating organizational knowledge from an action theory perspective (Parsons, 1951; Silverman, 1970; Schwandt, 1997). An action theory approach provides a framework for bridging cognition and action and offers insights into how organizational routines (Nelson & Winter, 1982; Winter, 1991) may be related to the creation of new organizational knowledge. It allows for an examination of multiple dimensions identified in the literature relative to both, the social process of creating and the nature of organizational knowledge. The study therefore incorporates the process and conditions for creating knowledge (Seely-Brown & Duguid 1998; von Krogh, Roos, & Slocum, 1994); the underlying learning processes associated with the transformational change process (Crossan & Inkpen, 1995; Garud, 1997; Nonaka, 1994; Spender, 1996); and the dynamic interaction between social and cultural assumptions of a firm as it collectively makes sense and creates knowledge about its own transformational change process (Das, 1997; Sackmann, 1992; Schwandt, 1997; Weick, 1995).

2 RESEARCH QUESTIONS

The overriding research question guiding this study is: *What is the nature of a firm's knowledge structure concerning organizational change during a transformational effort?*

3 PURPOSE AND OVERVIEW OF STUDY

The purpose of this study was to investigate the nature of a firm’s knowledge structure concerning change by examining how a firm understands what, where, when, why, and how it needs to transform itself in order to adapt to its evolving competitive market. There were three specific objectives: (1) to describe the nature of knowledge structure concerning organizational change, (2) to examine patterns of action relative to the creation of organizational knowledge during a transformational change effort, and (3) to advance understanding of organizational knowledge by understanding the links among collective action, knowledge structures, and the creation of knowledge. The expected results include an empirically grounded understanding of the relationship between the social processes and the outcomes of knowledge-creating systems.

To operationalize the research question, a case study using both qualitative and quantitative research methods was conducted (Yin, 2003a; Yin, 2003b; Creswell, 2003; Tashakkori & Teddlie, 1998; Yin, 1994). Data were collected using several methods: the Organizational Action Survey with participants who represented a cross-section of the firm; focus groups and interviews with informed sources who had both strategic and operational perspectives of the firm; observations of daily activities and strategic direction-setting discussions and meetings; and analysis of documents relevant to the firm’s strategic transformational change and knowledge-creating efforts.

Focus groups with informed sources using a storyboard activity coupled with a mapping process using emerging pragmatic theory were the primary source of data for developing the consensus maps and eventually the composite map that represented the firm-level knowledge structure. A purposeful sample of informed sources was used to select focus group participants, which included 4-6 members representing the various functions or business units within the firm. Informed sources were members considered to have an understanding of the stated strategic direction of the firm, as well as an understanding of the operational and programmatic levels of the business. The storyboard activity was designed to elicit both narrative and graphic depictions of the collective’s understanding of their firm’s transformation effort toward achieving the stated mission. Individual and group maps were developed, along with transcriptions and observational notes about the process, analyzed for evidence of the elements, their relatedness and importance within the knowledge structure, and to inform the graphic depiction of the “consensus maps” representing the knowledge structure for each focus group. “Elements” were the broad categories for the information units, e.g., leadership, structure, and history; “relationships” represented how the group linked these broad categories. In-depth individual interviews were conducted with top management team members using the same storyboard activity redesigned at an individual level to confirm knowledge structures and/or amplify any knowledge distinctions (Garud, 1997; Sackmann, 1992). Observations of daily practices within FinCo (the research site), along with survey responses that captured cross-section perceptions about organizational actions, were the source of data relative to learning and performing actions associated with how each firm adapted to its changing environment. The Organizational Action Survey (OAS) was used to inform the composite knowledge structure, specifically the relationships among the elements and the overall learning-performing orientation. Analysis of the documents and observational notes were used for delineating the contextual factors that affected the knowledge structure and/or provided insight into the research subquestions. Findings from each of the different forms of analysis

were then integrated to build a firm-level knowledge structure concerning organizational change that was graphically depicted within a composite map.

4 SITE DESCRIPTION

The firm selected for this study is a financial services firm located in a large Midwest city. This firm is known for its expertise in municipal bonds and has a longstanding tradition of steady returns to its investors. FinCo referred to itself as a “boutique” firm that operated within an industry of large conglomerates that offered a range of various financial products and services. FinCo was celebrating its 100th birthday during the time of the study and was in the process of expanding its product line and distribution channels in an attempt to reposition itself in a rapidly changing and growing financial services industry. The 1990s had brought a lot of changes to FinCo and to the financial services industry. The municipal bond market performed poorly, forcing FinCo to expand into other financial products and to make several structural changes to include firm acquisitions while at the same time downsizing nonprofitable business units, as well as the replacement of the Chief Executive Officer (CEO) and Chief Operating Officer (COO). FinCo’s corporate headquarters was in the Midwest, with new satellite offices and acquired firms on the East and West Coasts emerging. At the time of the study, FinCo had over 600 employees and was in the midst of management-directed transformation as part of its effort to achieve its new mission: “to become the premiere investment management firm.” Their transformation process included creating a new vision and value system, restructuring of the firm, realignment of their human capital and human resources system to support their efforts to expand into new product offerings and markets, and changes in power distribution as evident by the replacement of the CEO, COO, and many top management team members.

5 FINDINGS

To ascertain the nature of FinCo’s knowledge structure concerning change, several factors were examined: the number of elements, the relatedness between elements, the relative importance of the elements, and the overall comprehensiveness and completeness of the knowledge structure. For the convenience of the reader, Figure 1. reiterates the graphical depiction of the composite map representing FinCo’s knowledge structure concerning change obtained from the qualitative data.

FinCo’s composite map contained nine elements: (1) workforce, (2) nature of work, (3) culture, (4) history, (5) leadership, (6) structure, (7) product distribution, (8) governance, and (9) external environment. While there was some variance across the focus groups relative to the number of elements, the *number of elements* in each group was between seven and nine.

5.1 Relatedness Between Elements

The relatedness between elements was captured within the element matrices developed for each focus group and was supported by quotes from the transcripts, as well as the composite maps prepared for each focus group. Most often, participants made very overt references that made the link between the elements identifiable; for example, how the subcultures of FinCo were impacted by the new infusion of new employees. The nature, content, and quantity of the references informed the strength and directional relationships

marked between elements as well as the physical arrangement and proximity of elements within the map. The strongest of relationships, such as those between the external environment and product distribution, were indicated by two sets of double-headed arrows. Tight associations between elements, such as those between culture and history or those between leadership and structure, were indicated by close proximity of their elements to each other. Weaker influences between elements, such as those between product distribution and nature of work, were indicated by dotted lines. Double-headed arrows indicated strong reciprocal relationships, like those between product distribution and environment.

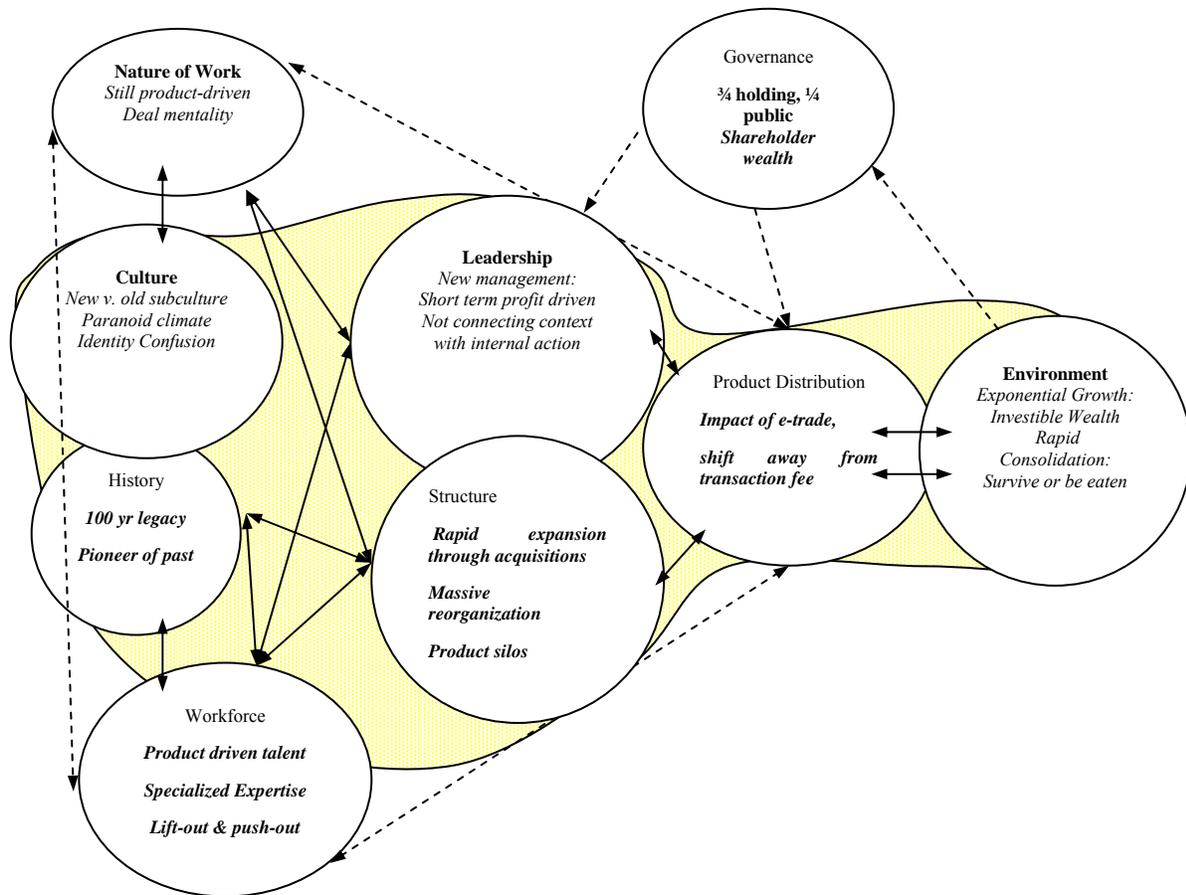


Figure 1. FinCo composite map, element descriptors inside circle, relatedness signified by arrows, core elements signified in shaded area.

The analysis of these arrangements of the element clusters revealed three findings relative to each: (1) the strong environment fit with product distribution, with weaker relationships with governance; (2) tight association between leadership and structure, with reciprocal influences from product distribution, workforce, culture/history, and nature of work, and a unidirectional influence from governance; and (3) tight associations between culture and history, with reciprocal relationships from workforce and nature of work to culture/history. Overall, there were reciprocal relationships among the elements within these clusters, but evidence did not support a strong relationship between the internal cluster of elements (culture, history) and the external environment. What this indicates is that FinCo’s knowledge structure concerning change relied on the filtering process and/or translation capability of leadership to convert information from the external environment relative to

how they perform their work or make sense of environmental changes relative to their product distribution. This finding was evident by participants’ perception that leadership was not connecting context with internal action. Additionally, the strength of the environment-product fit coupled with the directional nature of the relationships between the elements highlights the misalignment between the ends and means that was described by the participants. In other words, FinCo’s knowledge structure concerning change was relatively linear in its approach and did not account for the complexities associated with how the collective might make sense of the external cues in relation to structuring actions, firm goals, and the nature of their work. This interpretation was supported within several groups and highlighted in earlier analyses, which quoted participants’ responses about the lack of external validation needed to confirm whether decisions were on track as well as the disconnect between being customer oriented while still structured in product silos.

5.2 Relative Importance of the Elements

As previously described, FinCo had six core elements and three peripheral elements. The core elements—culture, history, leadership, structure, product distribution, and external environment—are depicted in Figure 1. within the shaded area. These elements highlight FinCo’s preoccupation with its product delivery and current perplexities with making sense of structuring actions while reconciling competing values relative to change. The three peripheral elements (workforce, nature of work, and governance) are depicted in the map outside the shaded area. These elements were identified as peripheral because participants perceived that the nature of work remained the same, for example, still a ‘deal’ mentality, still product-oriented, specialized experts, even with new expensive hires. Additionally, while the holding company and the perception of publicly traded stock options were perceived as important factors, these influences were motivated by profit and were not the essence of the focus on change.

5.3 Comprehensiveness and Completeness of the Structure

The comprehensiveness and completeness of the knowledge structure was the final area examined. The amount of elements indicates a relatively complex knowledge structure, although the relatedness between important elements was relatively limiting in that they were not all interrelated or reflective of a complicated system of elements—meaning that it was a relatively simplistic and linear map for change. The amount of information units within each component and the richness of the information unit itself—the depth and sophistication of the description as evident by language, use of analogies, and rationale used when providing an opinion—indicated overall comprehensiveness and completeness. The composite map was reasonably discernable and reflective of a traditional and input-throughput-output system that lacks feedback loops and/or a more iterative process.

5.4 Characterization of the Content of Knowledge Structure

To examine the content of FinCo’s knowledge structure, the following were examined: time (short term versus long term), environment (enactive versus passive), focus (business versus survival), motivation (process versus results), communication (collegial versus directive), output (knowledge versus product), and accountability (collegial versus mechanistic). The analysis of these dimensions was informed by both the qualitative analysis and the survey data, which contained items that provide enhanced evidence for these orientations.

FinCo's *time orientation* was *short-term rapid results/change for change's sake*, and reflected in statements such as: “We're sort of sprinting to catch up to the industry. We should have been there yesterday. We're already behind.” The survey data also reinforced this sense that they were not behind the lead firms within their strategic group with 76% of respondents perceiving that FinCo was holding its own or falling behind compared with similar firms. The sense of short term was associated with leadership's “knee-jerk” decision making, which was compared to that of “a runaway racehorse.” Finally, there was a sense of “change for change's sake,” coupled with the perception that leadership was encouraging any sort of action as evident by comments such as “just tries anything. Just do it.” The survey data supported the perception of rapid and massive change; 78% of respondents indicated that FinCo increased in size to a great extent in the last five years and 74% of respondents indicated that FinCo had changed a great deal in ways other than size. This evidence indicates the perception that FinCo was changing, although participants did not necessarily perceive the change as strategic, thoughtful, or systemic.

Although participants perceived FinCo to be actively making internal changes after years of “sitting on their hands while the industry changed,” their *orientation toward the environment was passive*. All of their references to change, both past and present, were made in terms of what was happening in the context and what FinCo did to respond to those demands. They referred to themselves as being “one step behind” and “shooting a gun at a moving target, always aiming where the target was and not where it will be.” It was knee-jerk decision making in reaction to external force.

FinCo's *focus was on growth for acquisition or profit*. Participants acknowledged that this change was to make FinCo a more suitable candidate for takeover—“survive or be eaten.” FinCo's motivation was results oriented as evident by its emphasis on development of profitable products for advisors and affluent end users. Thus, FinCo's *output was a product*, although there was evidence that some perceived FinCo's specialized expertise of knowledge about financial product performance as their product. The consensus was that FinCo's efforts during this time period were devoted to growth of profitable product lines in order to survive in the evolving financial services industry.

FinCo's *communication was directive*, and leadership was seen as the sole source for the direction of the change. This leadership-dictated change approach was evident in both the qualitative data, with focus groups describing leadership's lack of communication, and in the quantitative data, with survey respondents indicating a hierarchical and restrictive approach to information sharing. Additionally, FinCo's *accountability system was mechanistic* as evident by participants' references to the lack of recognition for individual efforts and to references about leaders being solely responsible for decision making about change.

The descriptors of FinCo's knowledge structures from the qualitative data integrated with the survey findings yield key insights about the nature of FinCo's knowledge structure. The following section was based on tabulation of common factors that emerged from both qualitative and quantitative to enhance the response to the main research question.

6 KEY FINDINGS ABOUT THE NATURE OF FIRM-LEVEL KNOWLEDGE STRUCTURE

This section discusses five key findings about the nature of FinCo’s knowledge structure concerning change drawn from an examination of the relatedness between the elements. The findings are as follows: (1) Change was perceived to be externally driven by the market, and FinCo was reactive and slow to meet the changing landscape; (2) FinCo’s strategic planning was perceived to be opportunistic, with its decision making perceived as lacking systemic foresight; (3) Prevailing logic was that FinCo was still a deal-making, product-driven sales company; (4) The restrictive access to information was contributing to a cynical climate and inhibiting the creation of knowledge about change; (5) Lack of leveraging of networks was inhibiting knowledge sharing.

6.1. *Change was market driven and FinCo was reactive and slow* to meet changes in its evolving competitive landscape, highlights several aspects of the nature of the firm’s knowledge structure. First, it reinforces the role of the external environment and FinCo’s passive orientation toward its environment. Next, both focus group data and survey data highlight FinCo’s poor ability to predict changes. This was illuminated in the qualitative data: “it’s like aiming a gun at a distant moving target, and just shooting it where it was now, and you’re always behind” and evident by the arrangement of elements within the knowledge structure, which positioned the external environment at one end of the map with little relationship to the other elements. This finding was evident in the quantitative data, through factor scores, rank order, and forced-choice results. Factor #1 (Adapting: Learning), which ascertains the extent to which FinCo predicts changes in the industry, tracks competitors, and seeks out information to meet unanticipated needs, had the lowest factor score mean (mean: 2.84) and one of the lowest item mean scores (Q: FinCo influences important factors and forces in its external environment: $x=2.36$). Additionally, Factor #1 rank-order was among the lowest perceived importance to FinCo’s organizational success.

6.2. *Short-term “opportunistic strategic planning” and lack of mindful leadership.* Analysis of the knowledge structure revealed a short-term, results-oriented focus as evident by repeated reference to the rapid nature of decisions and actions and participants’ descriptions of leadership’s “just try anything” strategy. Further, FinCo’s leadership was perceived as lacking foresight to making thoughtful system change and was highlighted with many analogies such as the runaway racehorse: “People have been relying on intuition and not a rigorous approach to decision making. The decisions are just kind of all over the place. And then, [decisions are] reversed quickly.” The survey data revealed that 62% of respondents perceived FinCo as following the intuition of management versus conducting a detailed analysis to make informed decisions. This finding highlights that participants were unable to make sense of leadership’s choices about organizational change relative to the external changes in their industry. Among the output measures, management practices had the lowest mean score [mean 2.59] on the entire survey. These findings combined to inform the overall perception that leadership lacked the foresight and capability to effectively communicate a meaningful case for change.

6.3. *The deal-making, product-driven sales company orientation,* highlights several aspects of the knowledge structure. First, this finding not only amplifies the product-environment relationship within the knowledge structure but also highlights the link to the

nature of work and to the workforce: “We will operate on a deal mentality, rather than actually investing and acting like we’re building a business. We’re bringing product people in because, ultimately, we are a company that sells product.” This was reinforced within the survey data, with 85% of respondents indicating that FinCo focused on the “production of a product versus the production of knowledge.” Additionally, “producing products of the highest quality” was ranked #1 in its perceived importance to organizational success. The second factor that was highlighted was the prevailing notion that the nature of work was still the same, as well as the nature of the workforce. Participants perceived FinCo to still be focused on specialized expertise in financial products.

6.4. Restrictive information access contributing to a cynical climate inhibiting knowledge creation was reflective of the knowledge structure in several ways. First, the arrangement of the elements placed leadership as the main portal for interpreting environment-product fit and therefore placing leadership as the lynchpin for any perceived incongruence or disconnect about strategic choices such as restructuring, product offerings, personnel selection, and prevailing values: “There’s not enough connection between what’s happening in the context. There’s not enough communication internally around validating from external perceptions that what we’re doing was right.” The lack of communication from leadership also contributed to a paranoid climate, and a climate in which elevator conversations were the primary mechanism for employees to converse about the organizational changes occurring: “The two largest corporate developments over the last 2 weeks and [there was] no announcement. Yet if someone loses an earring on the 33rd floor, everyone was e-mailed.” The survey data also supported these findings: 70% of respondents indicated that FinCo “protects new insights by sharing only with management versus makes them available to everyone who wants access”; 58% of respondents indicated that FinCo “tries to control who gets access to external information versus giving broad access to everybody”; and 64% disagreed that FinCo has “ways to share new operational processes and procedures throughout the firm.”

The closed communication system indicative of an internally controlled leader-centered decision-making process was seen as not only impacting the creation of knowledge about this process, but also impacting the development of internal capabilities to enable others to take action to support the transformation: “The president/CEO are the only ones that seem to be doing anything because they’re not allowing other people to participate or actively cultivating skills and staff.” The survey data also supported this finding: 76% of respondents indicated that “the firm considers leaders solely responsible versus expecting everyone to participate in decision making”; with only 41% of respondents indicating that they believe “leaders have skills needed to guide organizational change.”

6.5. The lack of effective leveraging of network was inhibiting knowledge sharing, as was evident within the knowledge structure. Participants referred to FinCo’s rapid expansion without integration, both in terms of the product silos and the disjointed business units that operated as separate entities, as well as to the subcultures that emerged. Participants made reference to the lack of knowledge sharing throughout the firm: “We don’t even have an organizational chart or an updated phone list”; “Before, I would call up a colleague in another business unit to go to lunch so that we could share what’s going on. But now I don’t even know who to call. And many of my friends have left.”

The finding expanded upon and was evident in their stories of missed learning opportunities. Participants discussed the lost opportunity in learning from both successful and failed product launches. In one group discussion, a participant was surprised to learn about a failed launch on a product she didn't know FinCo had been working on. Participants also discussed lost opportunities of sharing best practices with some of the newly merged or acquired firms, and of lost opportunities of sharing reflections about what went wrong with some of their recent mergers. Participants identified a lack of shared reflection, both about successes and failures, which were inhibiting FinCo's ability to create knowledge about their change process. Additionally, the lack of knowledge transfer within the firm and between the newly merged firms were missed learning opportunities—“there's no learning from partnering firms” —and was due to the lack of integration, coordination, and communication across the firm: “We each have a different slice of it, a different perspective.” Participants expressed their sense that FinCo needed more interaction across the firm: “We need more interaction between departments. There's not a lot of consistency with the message across the firm.”

Participants referenced both the formal and informal networks for communicating within FinCo. The survey data showed that 75% of respondents indicated that FinCo “follows chain-of-command versus using the most effective network to successfully deal with the situation at hand,” attributed to and/or confirmed by participants' perception that leadership controls information. Additionally, 85% of respondents indicated that FinCo does not use stories and references to let people know how they should perform their jobs, indicating a potential reliance on formal structures. Interestingly, participants indicated that they learn about changes through informal means, for example, elevator conversations, indicating a differentiation between the leader-controlled formal network for informing how work is done, and the employee-driven informal network that attempts to make sense of the changes because of the lack of leadership communication.

6.6. A systemic process for or emphasis on creating knowledge about change was not observed by participants. Overall, despite tightly coupled elements, participants perceived that the current structure's lack of integrating mechanisms for sharing knowledge across the firm were inhibiting their ability to make sense of the change. In response to the final focus group probe about how knowledge was created or shared about the transformation, one group stated, “it's not really shared.” Additionally, they stated that most sense making done by employees about the transformational change efforts occurs through informal means—“I heard it through the grapevine”—and participants highlighted that there's no way to validate what's been said: “It's through the rumor mill.” Every focus group indicated that there is not an emphasis placed on or a process in place for creating and sharing knowledge about the transformation. One group stated, “there's the occasional ‘let's get together’ and [we'll] have the CEO talk to us [and let us know] what's going on,” but the majority of the groups pointed out that this had not occurred for the past six months. The consensus on the lack of creating and sharing knowledge about the transformation process could be attributed to the perception that FinCo was action- and performance-oriented rather than reflection- and learning-oriented. This performance orientation was reinforced by the profit-driven motive, coupled with the perception that FinCo had to grow to meet the new industry pressures, reinforcing the “eat or be eaten” urgency of change.

The external driving force for change encapsulated participants' rational—“thrive or be eaten alive”—and was embedded in the profit-driven motive descriptor for leadership and

governance. Participants recognized why change was needed, but there was no consensus regarding leadership's choices for how, when, where, and with whom they should change. Participants perceived a misalignment between the external indicators and strategic choice. Additionally, the survey revealed that only 50% of the survey respondents agreed that FinCo “had clear performance goals” and that the “firm has established an achievable mission.” While participants agreed about the need to “catch up” to the industry, their comments reflected that the firm has not yet clearly identified what strategic group they belong to or convincingly articulated a congruent image and identity: “The financial service industry was breaking into very large groups and very small target groups. FinCo has chosen to become a more full-service or full-product line firm. One question for us was: On what dimension do we compete as a firm?”

Again, this finding reinforced the perception of lack of foresight capability of leadership and/or the lack of ability to build trust and a meaningful case for change.

Overall, FinCo's knowledge structure was indicative of a performing orientation. This was supported not only in the qualitative comments that amplified the focus on product, but also within the survey in which performing actions were the dominating factor within the forced-choice, rank order, and factor mean scores. Although participants perceived that FinCo was in the process of testing new product and program launches, these efforts were not systematically coordinated. Further, participants did not perceive that best practices or procedural insights about product launches were shared and therefore FinCo's knowledge structure descriptor could be characterized as “undirected experimentation.” Finally, participants highlighted the lack of knowledge sharing across business units and the lost opportunities of learning with new partnering firms. Additionally, the infusion of new workers had inhibited the informal network, while the formal network had all but ceased most communication about the transformation efforts or new developments, resulting in a paranoid culture resorting to elevator conversation. Therefore, FinCo's knowledge structure concerning change was limited in its ability to produce knowledge about change and instead was more appropriately structured to produce technical knowledge about financial products relevant for distribution to advisors.

7 SUMMARY INSIGHTS

Overall, the nature of FinCo's firm-level knowledge structure concerning organizational change was reflective of a performing orientation driven by an end-results profit motivation for change. A general characteristic that emerged from the analysis was that the knowledge structure was relatively closed and internally focused, with tight coupling between leadership and structure elements. The firm's short-term results orientation combined with the directive, mechanistic approach gives insights into the internal dynamics associated between leadership and culture and the other influencing elements.

8 CONCLUSION

This study sought to understand the dynamic social process of creating organizational knowledge during transformational change through understanding the nature of a firm's knowledge structure concerning organizational change. To best understand how firms know what, where, when, why, and how to change, the researcher used mixed methodologies to

gather real-time data to include qualitative and quantitative strategies such as: the Organizational Action Survey (Johnson, 2000) using a cross-section representation; focus group storyboarding using emerging pragmatic theory with informed sources who had both strategic and operational perspectives of the firm; interviews with top management team members; observations of planning meetings and daily routines; and document review of stated strategic direction and transformational effort plans.

The study was based on the premise that the firm’s ability to create new knowledge is a prerequisite for organizational transformation (Hedberg, 1981; Lundberg, 1989; Nonaka, 1991; Schwandt, 1997); and that knowledge creation is a result of the recursive social process (Giddens, 1984; Schwandt, 1997) in which there is a dynamic interaction between the social actions of human collective and the cognitive structures that guide those actions. Using a social action theory approach that allowed for a comprehensive examination of the social processes involved at the collective level, the study was able to meet its objectives of: (1) describing the nature of firm-level knowledge structure concerning organizational change; (2) examining patterns of actions at the firm-level during a transformational change effort; and (3) advancing the theoretical understanding by linking collective action, knowledge structures, and creation of knowledge through empirical grounding.

There were seven primary characteristics that represent the nature of knowledge structure concerning organizational change: (1) internally focused knowledge structure that was preoccupied with production; (2) a dominant core that suppressed rather than evoked inquiry; (3) tightly coupled elements that contributed to the reduction of equivocality and inquiry; (4) action orientation focused on performing rather than learning; (5) structuring actions that reflected an imbalance of requisite variety and equifinality; (6) default to history/culture elements in response to threatening conditions in external environment; and (7) skeptical perspective that viewed change as an outcome rather than an opportunity perspective that viewed change as an ongoing means to enhance adaptive capacity.

In general, the knowledge structure was too simple given the complexity of the external environment. The focus was on present rather than future action, performing rather than learning, and driven by prevailing norms of resistance. The knowledge structure lacked capacity to create knowledge about its change process, and in turn reinforced the performing orientation at the expense of generating new goal-referenced knowledge about plausible future actions. Implications and recommendations for future research included longitudinal comparative case studies using mix methodologies with real-time data to allow for the tracking of altering knowledge structures during periods of punctuated and incremental change. Additionally, continued work with multi-level theories derived from cross-disciplines that include both the macro and micro level allowed for a more comprehensive understanding of collective knowledge structures.

The findings from this research have several contributions to practice, both in terms of how firms design their change interventions, as well as how leaders might frame their strategic intent for a transformation effort. First, firms should incorporate a focus-group story-telling reflective process as part of the design for the change effort. Study participants commented after the focus group activity that they had not had the opportunity to dialogue with a cross-functional group of colleagues to help make sense. This process can therefore help highlight potential pitfalls and/or enhance the sensemaking and reflection process to increase the probability for creating new knowledge. If the notion of collective mind

highlights the need to have shared understanding of the rules of interaction and not necessarily shared values, then firms must allow for members to develop relationships and a sense of trust in order to allow for successful collective action as described by Weick and Roberts (1993) relative to the flight deck crews on aircraft carriers. These are critical characteristics and conditions needed build a culture of trust, inquiry, and experimentation that allow for the creation of new knowledge to enable transformational - an element lacking in the knowledge structure within this dissertation research. Therefore, firm should focus on the importance of developing a set of rules about how to relate to each other; e.g. critical reflection, thoughtful questioning of actions, in order to produce mindful action when designing transformational change efforts.

Finally, as leadership teams are constructing their plans for strategically repositioning their firms and/or plans to alter the way they do business within the firm, they should be very attentive to the prevailing cultural norms relative to inquiry, reflection, learning, risk-taking, innovation, collaboration, and other value orientations about the nature of relationships within their firms. Leaders need to build into their plans, a process for ongoing dialogue, an atmosphere for critical questions, and a motivational reward system for reflection and intelligent risk-taking. Additionally, the findings demonstrated that leadership may not be a key factor for creating knowledge, rather it may be a social process whereby members can make sense of and create knowledge about change. Perhaps then leaders should focus energy on establishing the right conditions that allow members to emerge at critical points, and/or view their roles as more “sense-making creators” or “inquiry provocateurs” to allow for the creation of new knowledge and emergent change.

The findings from this study also contribute to our conceptual development about knowledge creating process and necessitates some reflection on the existing theories and models relative to change and to collective cognition in three areas: (1) need for non-linear living systems approach to change, with consideration for a dualistic approach such as viewing living social systems as both open-closed, viewing organizational routines as both a source for stability-change, and viewing the need for both learning and performing actions for enduring deep-level transformation; (2) integration of reflective practitioner (Schon, 1978) with change models and other knowledge-creating processes that can be leveraged by leadership teams; and (3) recognizing the role of history, identity, and memory in sensemaking process that inhibits or enables creation of organizational knowledge.

Most models of strategic change are still based on a linear approach rather than a non-linear living systems approach, which highlights the dynamic nature of change. Human interaction is very complex and therefore theories of change need to take into consideration the complexity of the relationships and interactions. The dominant approach to change has been from a rational perspective that has not allowed for and/or accounted for the inter-subjectivity, recursive nature, iterative, and multiplicative essence relative to the network and co-evolution of complex social systems. Change is more of an emergent phenomenon and context dependent, which requires frameworks that are requisite for analyzing this intricate web of relationships, actions, and interactions. And while previous scholars treated routines as fixed entities driven by exogenous forces such as the market (Tushman & Romanelli, 1985), there is a dual nature to routines involving endogenous change that occurred as a result of engagement in the routine itself (Feldman & Pentland, 2003). So, while institutional theory would highlight inertia, deep structures, and performance and the

environment as the ‘triggers’ for change, this new approach sheds light on how firms might alter the patterns of interaction for emergent forms that sustain change. So while a focus on efficiency or process management activities might be good in stable contexts (exploitation), for those firms interested in ‘transformational change’ – they must create new knowledge in order to dramatically alter the nature of their work, nature of their relationships, the nature of how they make sense of cues from the changing external environment, and build in a process for continually experimenting and updating their work processes and social practices. Concepts such as the reflective practitioner, double intentionality, and critical inquiry described the type of activities firms should engage in to enhance awareness and meaning making at a collective level. The authors feel they’ll contribute to the “learning fusion” by bringing an interdisciplinary approach that emphasizes the contribution of complex adaptive systems and other non-linear living systems collective cognition concepts.

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APPENDIX A: Focus Group–Participant activity direction sheet

<p><i>You’re part of a team that has just been given an assignment to create a documentary about XYZ firm’s efforts to move from a traditional ABD company to a premier EFG firm. Think of this as similar to a “48 Hours” show.</i></p> <p><i>The focus of this documentary is on the strategic transformation of an ABD company whose mission is to “rapidly become the premier EFG firm.”</i></p> <p style="text-align: center;"><u>Instructions</u></p>	
<p>The objective of this activity is to create the logic and story line for this documentary. The team has 45 minutes to accomplish this. Below are the six steps and recommended time allocation. The focus of the story is on what is currently happening. The story should be based on what you are experiencing, Not what should be or what you and/or the firm would like it to be.</p>	
<p style="text-align: center;"><u>Step 1</u> “The story line” Who, what, where, why, why, how (5 minutes)</p>	<ul style="list-style-type: none"> • Individually outline the story using Post-it notes. • Write one idea per Post-it note. • Include illustrative examples to support idea generated when appropriate. • You may consider both external and internal aspects.
<p style="text-align: center;"><u>Step 2</u> “The story depiction” preparing individual story maps (5 minutes)</p>	<ul style="list-style-type: none"> • Take your Post-it notes and arrange them the sheet of paper provided, drawing any lines, arrows, etc....to help you explain the story. • Write the significant documentary point that you depicted on your sheet about the transformation effort (e.g., plot line).
<p style="text-align: center;"><u>Step 1</u> “Team sharing” (10 minutes)</p>	<ul style="list-style-type: none"> • Each person takes a turn to share their picture and story with the group. • As you are listening, you may want to note any patterns, commonalities, or gaps across the stories.
<p style="text-align: center;"><u>Step 1</u> “Creating the storyboard” (10 minutes)</p>	<ul style="list-style-type: none"> • Design the storyboard on the large sheet on the wall. • Cluster/categorize everyone’s Post-it notes onto the large sheet on the wall and/or draw directly onto the sheet.
<p style="text-align: center;"><u>Step 1</u> “Bridging the story logic” (10 minutes)</p>	<ul style="list-style-type: none"> • Review the logic of the story within the team. • Draw arrows, lines, etc. to illustrate how knowledge about this story and/or the transformation process is being created and shared within the firm.
<p style="text-align: center;"><u>Step 1</u> “The final product” (5 minutes)</p>	<ul style="list-style-type: none"> • Title the story. • Write a brief description that summarizes the story; e.g., an executive summary that might be an overview presented at the beginning of the show.