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## ACADEMY OF STRATEGIC MANAGEMENT JOURNAL

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#### LETTER FROM THE EDITOR

Welcome to the *Academy of Strategic Management Journal*. The *Journal* is owned and published by the DreamCatchers Group, LLC. The Editorial Board and the Editors are appointed by the Allied Academies, Inc., a non profit association of scholars whose purpose is to encourage and support the advancement and exchange of knowledge, understanding and teaching throughout the world. The editorial mission of the *Journal* is to advance the field of strategic management. To that end, the journal publishes theoretical and empirical manuscripts pertaining to the discipline.

The manuscripts contained in this volume have been double blind refereed. The acceptance rate for manuscripts in this issue, 25%, conforms to our editorial policies.

Our editorial review policy maintains that all reviewers will be supportive rather than destructive, helpful versus obtrusive, mentoring instead of discouraging. We welcome different points of view, and encourage authors to take risks with their research endeavors.

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# Articles

# SKILL DEFICIENCIES IN DIVERSITY AND INCLUSION IN ORGANIZATIONS: DEVELOPING AN INCLUSION SKILLS MEASUREMENT

Helen Turnbull, Nova Southeastern University Regina Greenwood, Nova Southeastern University Leslie Tworoger, Nova Southeastern University Charles Golden, Nova Southeastern University

#### **ABSTRACT**

Managing a diverse workforce is a business imperative yet challenges exist. Organizational members might neither recognize the impact they have on others nor how to build their toolkit of inter-cultural competence. If the organizational goal of embedding an inclusive environment is at odds with the values, behaviors, and attitudes of its employees, then inclusion will not be fully achieved and organizational performance will be impacted.

While it is imperative to understand diverse attitudes, the next step in organizational diversity competence is identification of skills gaps and remediation. To accomplish these organizational outcomes we propose the further development and validation of an instrument, the Inclusion Skills Measurement Profile (ISM) The instrument will provide organizations with the information necessary to move diversity to the next level. The instrument will identify diversity skills gaps, thus enabling individual, teams and organizations to enhance their competence in this area. The instrument will provide feedback in seven areas: diversity sensitivity, integrity with difference, interacting with difference, valuing difference, team inclusion, managing conflict over difference, and embedding inclusion. The seven categories are based on experience of experts, and grounded firmly in relevant theory. Additionally, the article will present implications for practice and suggestions for future research.

#### INTRODUCTION

The benefits of diversity in a global economy are well recognized (Allen, Dawson, Wheatley, & White, 2008). Managing a diverse workforce is acknowledged as a business imperative yet challenges continue to exist. In order to maximize and leverage the benefits of 21<sup>st</sup> century workplace diversity, companies spend time and resources on diversity training, even though the

outcomes are often less than desired (Chavez & Weisinger 2008). If the organizational goal of embedding an inclusive environment is at odds with the values, behaviors, attitudes and feelings of its employees, then the goal will not be fully achieved. Because organizational members might not recognize the impact they have on others, there is a need to build their toolkit of inter-cultural competence in order to insure an inclusive environment. Such knowledge is essential in today's organizations.

While there has been a focus on organizational policies and procedures regarding diversity, less time has been spent on the "norms and values" involved in creating inclusiveness ( Pless & Maak, p. 129). Indeed barriers are often created that make inclusion difficult to achieve (Pless & Maak, 2004). Despite the move in the practitioner literature from diversity to inclusion, Roberson (2006) indicates that "there is a critical difference between merely having diversity in an organization's workforce and developing the organizational capacity to leverage diversity as a resource" (p. 234). Inclusion, as conceputalized by Roberson, is distinctly different from diversity. Diversity focuses on the makeup of the population or the demographics, while inclusion encompasses involvement, engagement, and "the integration of diversity into organizational processes" (p. 228). Chavez and Weisinger (2008) also recognize the distinct difference between diversity and inclusion and view inclusion as an "attitudinal and cultural transformation" (p. 331). Lieber (2008) also stresses the importance of creating a supportive environment that is not only diverse but also respectful and inclusive.

While it is imperative to understand attitudes and perceptions of diversity (DeMeuse & Hostager, 2001) the next step in organizational diversity competence is identification of skills gaps and remediation, thus enabling individuals, teams and organizations to enhance their competence in this area. In order to accomplish these organizational outcomes an Inclusion Skills Measurement Profile (ISM) has been developed and will be validated. The purpose of the instrument is to fill this gap with the view to provide organizations with the insight and tools necessary to move diversity to the next level. It will provide feedback in seven areas: diversity sensitivity, integrity with difference, interacting with difference, valuing difference, team inclusion, managing conflict over difference, and embedding inclusion. It is designed to enable individuals and organizations to recognize the skills necessary to embed an inclusive environment and to identify the skills gaps that need to be addressed in order to ensure a high level of success and competence. If individuals within the organization give lip service to the goal of inclusion, speak from a politically correct frame of reference and yet do nothing to enhance their awareness, knowledge and skills when dealing with difference, they will ultimately be unable to embed an inclusive environment. Complex systems are intricate and change only when positive influences occur at multiple levels. The seven categories address such complexity and affect the organization at different levels: intra-personal, inter-personal, group, and organizational. The skills components need to embed an inclusive environment in an organizational context.

The development and validation of a complete instrument for identifying skill dificiencies in diversity and inclusion will take place in two phases. Once the instrument has been validated in the self assessment process in Phase One, the instrument testing process will be expanded. In Phase Two an individual will be assessed by six colleagues such as peers, supervisors and subordinates in a 360 degree approach. The two phase testing process will yield a portrait of an individual's skill level on inclusion and diversity. In addition the organization will be able to access cumulative reports to identify inclusion skills of teams or business units. This will enable identification of collective levels of competence or skills gaps which need to be addressed for the organization to compete in a global business environment. Once organizations and individuals have self-awareness, they can begin to address gaps and build on skills to embed a culture of inclusion that brings significant, sustainable competitive advantage in the global marketplace.

#### **DIMENSIONS OF INCLUSION**

The ISM Profile is designed to help individuals and organizations recognize the skills necessary to embed an inclusive environment and to identify the skills gaps that must be addressed in order to ensure a high level of success and competence. The theoretical framework within which each category resides is based on expert knowledge and research. The ISM Profile is based on the concept that all levels of a system work synergistically. Kivel (1995) argues that alliances should be formed across differences. He contends that in order to build an inclusive environment we need to build competence and become allies in an ongoing strategic process that involves personal, social and organizational analysis. Each category of the ISM Profile, the Intra-personal, Inter-personal, Group, and Organization Level, is a building block in that process. Distributed within the building blocks are seven diversity competencies. (See Figure 1) Below, the levels and key competencies are presented and explained.

Figure 1				
INDIVIDUAL and ORGANIZATIONAL LEVELS	DIVERSITY COMPETENCIES			
Intra-personal	Diversity Sensitivity Integrity with difference			
Inter-personal	Interacting with difference Valuing difference			
Group	Team inclusion Managing conflict over difference			
Organization	Embedding inclusion			

#### Intra-Personal: Diversity Sensitivity and Integrity with Difference

The Intra-personal Level relates to one's own personal growth work. At that level, the ISM Profile devotes two categories, namely, Diversity Sensitivity and Integrity with Difference to providing measurement and feedback on how well an individual is doing in the area of their own personal development. Are attitudes congruent with behaviors? Do they espouse values that support embracing differences and do they behave with integrity in support of individual, group and organizational efforts to embed inclusion?

The Diversity Sensitivity key competencies being measured include:

- ♦ Monitors own diversity sensitivity and impact on others
- ♦ Makes a conscious effort to learn about those who are different
- ♦ Pro-active in exposing self to a range of experiences with those who are different
- ♦ Takes steps to improve own diversity awareness

In order to demonstrate competence in the area of Diversity and Inclusion, individuals need to be aware of the impact they have on others and build their own toolkit of inter-cultural competence. Trompenaars (1998) states that being aware of our own culture, "our own assumptions and expectations about how people 'should' think and act is the basis for success" (p.2). He dispels the notion that there is one best way of managing and organizing. He reinforces the need for diversity sensitivity by emphasizing the necessity to understand our own culture better, to be willing to learn about cultural differences in a non judgmental manner and to provide insights into the global vs. local dilemma facing international organizations. Hofstede (1997) points out there are differences between individualistic cultures and collectivist cultures, between masculinity and femininity, and between power and distance markers within cultures. Becoming more fully aware of these dimensions helps individuals to understand the impact they are having on people from other cultures who do not share their values or ways of doing things. This knowledge will also offer deeper understanding and enhance the chances of respectful cross cultural communication.

Integrity with Difference, the second competency at the Intra-personal Level, measures the following key competencies:

- ♦ Aware of personal attitudes and beliefs about members of own social identity group
- ♦ Vigilant about the tendency to discount self and members of own social identity group due to internalized oppression
- Able to encourage those from own social identity group(s) to acknowledge and own the merits of their difference while honoring the diversity in others

Integrity with Difference is grounded in the theories of Internalized Oppression. Turnbull (2005) points out that internalized oppression is a complex phenomenon and is often hidden from consciousness. People absorb negative messages from the dominant culture about themselves and their social identity group(s). These hidden messages then dictate behavior towards self and other members within our group(s) (Turnbull, 2005). Suzanne Lipsky (1987) speaks of the impact of hurts and mistreatments that are not healed.

We know that every hurt or mistreatment, that is not discharged (healed), will create a distress pattern (some form of rigid, destructive, or ineffective feeling and behavior) in the victim of the mistreatment. This distress pattern, when re-stimulated, will tend to push the victim through a re-enactment of the original distress experience, either with someone else in the victim role, or, when this is not possible, with the original victim being the object of her/his distress (p. 2).

The impact is deeply embedded in the psyche of individuals causing them to behave in ways that feel "normal" and yet are in fact dysfunctional, potentially self destructive and a direct result of oppression. Scott (1990) speaks of the difference between the public and hidden transcripts in the relationships between dominant and subculture members, stating that the dialogue and behaviors of sub-culture members is very different when they are in the safety of their homogeneous group, from the dialogue and behaviors that occur when they are in the presence of the dominant (Scott, 1990). San Juanita Garza spoke of the impact of internalized oppression when she said that "White people are not the only people acting out of Whiteness. I've known white people who didn't ooze whiteness as much as some Hispanic or African American people I know" (Rodriguez & Villaverde, 2000, p. 61). Garza provided us in this instance with an example of how internalized oppression is connected to assimilation behaviors. Internalized oppression happens for women when they internalize the negative messages about themselves that men have perpetuated and then sabotage themselves and other women without the direct intervention of men. The fact that this behavior appears to be self motivated then closes the vicious circle, enabling the dominant culture members (in this case men) to justifiably state the case that the subculture (women) are dysfunctional and disorganized and do not believe in themselves, lack the confidence to be leaders and perpetrate damage to their own group. It is in many ways the unconscious nature of domination by consent.

A further disquieting part of this phenomenon between women is that it takes place within and across groups of women and not just from men to women. Relationship challenges exist both within homogenous and heterogeneous groups of women. Internalized oppression has its victims adopt as true, the misinformation that is directed towards them. Internalizing negative messages about self and others as a direct result of oppression is an implicit part of the story (Turnbull, 2005).

#### **Inter-Personal: Interacting with Difference and Valuing Difference**

At the Inter-personal Level, one is concerned with how well individuals relate to others. Two competencies, Interacting with Difference and Valuing Difference, are key at this level.

It goes without saying that in order to thrive and survive in the corporate environment one must learn to get along well with others; to relate to people as individuals and in groups in a manner that allows for the most productive working relationships. Diversity is a competitive advantage and not just a nice thing to do. Selko (2008) also recognizes that diverse teams are more innovative and creative and that this increases opportunities for competing in the marketplace. There are added dimensions of complexity when managing interpersonal relationships across difference that are not always apparent. To become interpersonally competent when interacting with difference requires an enhanced level of awareness of other people's diversity preferences. This awareness allows for authentic expression of differences and does not require or assume that people will assimilate to the style of the dominant culture, or indeed have to "be like you" in order to be considered competent. Interacting with Difference and Valuing Difference categories seek to measure that enhanced awareness.

Interacting with Difference measures the following key competencies:

- ♦ Listens actively for other frames of reference and does not prejudge
- Seeks to understand and adapt to different styles when working with those who are different
- ♦ Treats others as they wish to be treated
- ♦ Shows a readiness to change the way he/she does things to meet the needs of those from diverse backgrounds

Despite good intentions and the desire to be diversity sensitive, people often have cultural blind spots, operating out of their own frame of reference and not realizing that others might prefer to bring their own diverse style to the table. Listening, for example, has always been a challenging skill and many people would admit to having poor listening skills. When listening across differences is required, there is an added dimension of complexity. Adler (1997) points out that cultural blindness is an obstacle to success in business. Individuals and organizations have a choice between taking a parochial view - our way is the only way; an ethnocentric view - our way is the best way; or a synergistic view - the creative combination of many ways may be the best way. How much do individuals really take account of diversity and cultural differences when interacting with and managing others? Do individuals and organizations know how to take the synergistic view? Pless & Maak (2004) make the case for fully utilizing diverse teams to "broaden the pool of experience and bridge cultural boundaries in search of innovative solutions" (p.130).

The second set of competencies at the Inter-personal Level is Valuing Difference. The key competencies it measures are:

- ♦ Encourages innovation and creativity in the workplace
- ♦ Embraces diversity as a resource to benefit the organization & its members
- ♦ Treats diversity as an asset, not a liability
- ♦ Supports systems, procedures and practices which promote diversity in the workforce
- ♦ Leverages the benefits differences can add

Trompenaars (1998) argues that the new breed of international managers, educated according to the most modern management philosophies, are being trained in what is purported to be the latest management techniques and management solutions; but he asks how universal are these solutions? Most management models come from an Anglo Saxon frame of reference and are not easily translated into other cultural frameworks. Trompenaars points out that classical management theorists, from F.W. Taylor to Tom Peters, have, consciously or unconsciously, given the impression that there was one best way to manage people. He argues that reaching for a tool box that that encourages assimilative behavior is a sure way to limit innovation and intercultural success (Trompenaars 1998). Roberson (2006) suggests that it is still questionable whether corporations are really in the business of valuing diversity, "or are just paying lip service and reducing backlash" (p. 213). It is imperative, when interacting with difference, to be conscious of our own biases, to be open minded to others and willing to embrace different ways of doing things. Milton Bennett's "Developmental Model of Intercultural Sensitivity" (1993) suggests the ultimate goal is to leverage cultural differences. This is consistent with the coaching notion of unleashing people's full potential. Intercultural coaching is of benefit to managers in global organizations who have a wide mix of regional, national, ethnic, religious and professional cultural groups (Somers, 2006).

#### Group: Team Inclusion and Managing Conflict over Difference

At the Group Level, Team Inclusion and Managing Conflict over Difference are the key competencies that relate to how an individual can work effectively with groups of individuals.

Groups and teams are a way of life in the corporate world and over the course of our career we are members of many groups, including project teams, cross functional teams, task groups, departmental groups, employee resource groups etc. Eastern and Western cultures place different values on what it means to be a member of a group or team and these differences manifest themselves in the working relationships, cooperation and misunderstandings of the individuals on the team. In addition, within and across cultures, there are overt and covert differences in perception that can contribute to conflict over values, behavior and attitudes of team members. The Team

Inclusion and Managing Conflict over Difference categories seek to measure competency and awareness in this area.

Team Inclusion measures the following key competencies:

- Takes every opportunity to ensure that project teams and work groups are diverse
- Encourages and capitalizes on the diverse contributions and strengths of team members
- ♦ Practices inclusive behaviors in groups and intervenes sensitively when exclusionary behaviors occur.

Diversity is much more than a numbers game. Just because there is a diverse group of employees does not mean that the full complexity of the diversity issues are understood. Team inclusion also means more than just having a team of diverse members. It requires us to know our own paradigms and to be inclusive of other people's paradigms. It challenges us to move out of our comfort zone and to be accepting of the fact that there is not one right way and to allow others to bring their authentic and creative selves to the team dynamic. Adler (1997) states that "highly productive and less productive teams differ in how they manage diversity, not, as is commonly believed, in the presence or absence of diversity" (p.138). Adler argues that the conditions for diverse teams to be effective are when innovation and divergence of views are needed, and where mutual respect, equal power and differences are recognized.

Resolving Conflict over Difference, the second competency area at the Group Level, measures the key competencies:

- ♦ Takes a conscious effort to learn about different styles of conflict resolution
- ♦ Has insight into and monitors own preferred conflict management style and its impact on others
- ♦ Is pro-active in managing conflict over difference when it arises rather than avoiding it
- ♦ Actively creates the space for people to use different forms of conflict resolution

Cross cultural communication is an essential part of embedding an inclusive environment. Adler (1997) reminds us that perceptive patterns are culturally learned, neither innate nor absolute. Culturally learned patterns fade into the background however, and we operate out of them, often at an unconscious level. Hammer (2005) states that inter-cultural conflict interaction involves an affective or emotional reaction, typically in the form of antagonism based on perception of threat or interference by one or more parties in the goal-seeking capability of the other. Given this reality, cross cultural and cross gender conflict and misunderstanding is almost inevitable. Managing conflict across differences first requires us to understand the perceptual frame of reference of both

parties to the conflict. With the growth of global business more attention needs to be paid to intercultural competencies and the cost of ignoring these skills gaps. Allen, Dawson, Wheatley & White (2007) point out that "the presence of intercultural conflict can in fact lower cohesiveness, cause communication problems and create inter-group tensions" (p.21).

#### **Organization: Embedding Inclusion**

At the Organization Level, the impact of culture on the organization and the impact of the organization on culture is the area of concern. There is one competency to measure, Embedding Inclusion. To compete effectively in a global marketplace requires corporations to change their organizational culture to attract and retain diverse talent, as well as to resonate effectively with the diversity of their suppliers and customers. Understanding how respecting differences can impact on productivity and the bottom line is a business imperative. Many corporations strive to be recognized on the "Best Companies to Work" as they see this as an indicator that they are not only valuing diversity, but are reaping financial and good market performance as a result of their diversity policies (Roberson & Park, 2007). Enlightened organizations strive to create an environment where all people are valued and respected not just as individuals, but recognized for the value their difference can bring to the workplace. The Embedding Inclusion category measures individual capability, awareness and skills to contribute to this process.

Embedding Inclusion measures the following key competencies:

- Is actively involved with organizational issues that promote diversity awareness
- ♦ Constantly seeks out opportunities to lobby influential individuals and groups on issues of diversity and inclusion
- ♦ Challenges prejudice and injustice, when confronted with evidence of it in the workplace, directly or indirectly
- ♦ Is an active advocate of treating people fairly and accommodating difference in all spheres of life i.e. personal, social, professional and the wider community

Johnson (2001) when speaking of the impact of power and privilege reminds us that systems shape the choices people make and that the simplest way to change the system is to become a role model for that change. Johnson contends that when we can clearly see the paradigms on which systems are based, we have the power to change them and to build new and more open systems that are receptive to global inclusion. Part of this work is being willing to change the way we do things as individuals and as organizations, and to remain open to not only doing things differently ourselves, but to allow others to bring their different and unique style to the workplace. The ultimate goal is to embed an inclusive environment within the organization by ensuring that at all levels of the system one has an enhanced level of awareness and skill to value and manage diversity.

Roberson & Park (2007) highlight the need for 21<sup>st</sup> Century leaders to effectively manage the demographic workforce changes. They acknowledge the fact that there will be more women and people of color in the workplace. Not learning to effectively managed these groups and embed an inclusive environment will negatively impact an organization's bottom line and competitive edge.

#### DEVELOPMENT AND VALIDATION OF THE INSTRUMENT

#### Methodology

#### Phase I.

#### **Subjects**

In Phase I, a minimum of 100 currently employed adults will be asked to take the ISM Profile questionnaire. All will be over the age of 18 and asked to volunteer without compensation. Also, 20 of the original sample will be asked to take the test again three weeks later in order to assess reliability of the instrument. Students with full time jobs who attend business school weekend classes will be asked to participate, as will others in the business community through word of mouth. It is anticipated that 120 subjects will need to volunteer to get the minimum 100 completed forms.

#### **Procedure**

After subjects volunteer, the consent procedure will be explained and they will be asked to sign a consent form and then given a paper copy of the questionnaire to fill out. It is anticipated that this will take approximately 20 minutes to complete. The individuals will rate themselves on a variety of questions related to the topic of attitudes towards diversity. A copy of the full questionnaire is included in Appendix I. The completed questionnaire answers will be entered into the Statistical Package for the Social Sciences (SPSS, 2008) by student employees. The data will be used to analyze the test, insure the reliability of the questions, determine the ideal length of the test, and determine whether all scales are necessary in the final instrument. The instrument will be revised based on the statistical data and the revised instrument used for Phase II.

#### Phase II.

#### **Subjects**

During Phase II, at least 100 "focus" subjects will be solicited to take part in the second phase. Students with full time jobs who attend business school weekend classes will be asked to

participate, as will others in the business community through word of mouth. It is anticipated that at least 150 sets of 7 tests (1 focus plus 6 verification) will be needed to get at least 100 completed sets for statistical analysis.

#### **Procedure**

Focus subjects will be asked to take the questionnaire themselves and then hand out an additional 6 verification copies to supervisors and peers in their business environment. The forms will be coded so that the researchers are aware which verification copies are associated with which focus individual without knowing the identity of any of the participants. All subjects will be asked to self-identify themselves as a member of one of the diversity groups assessed by the questionnaire (gender, race, ethnicity, sexual orientation, age and religion), but this information will not be used to select or solicit subjects. It is anticipated that at least 50% of the focus and verification subjects will self-identify themselves as belonging to one of the diversity groups.

All of the participants will be given pre-paid envelopes in which to return their completed questionnaire. Focus and verification questionnaires will be identical except that the verification questionnaire will ask the relationship of the individual to the focus individual and ask that respondent to comment on the focus individual rather than himself or herself.

#### **Evaluation and Analysis**

#### Phase I

Phase I data will be analyzed using SPSS 16. Data for each of the scales will be analyzed for internal reliability and determining the optimal number of items for each scale. Factor analysis will be employed to identify sub-factors within each scale and their contribution to the overall attitude being measured for appropriateness in that scale. Item inter-correlations across and within the scales will be used to eliminate items which are redundant. Reliability data will be used to eliminate items which show unacceptable levels of test-retest reliability. Scale intercorrelations will be used to determine if scales are redundant or actually measuring different things. Factor analysis will also be employed to examine the relationship of the scale scores. Using this information, revisions to the questionnaire will be made with the goal of retaining the maximum information while reducing the overall number of items. Additional scales using the existing items may also be added if the factor analyses of the scales show that scales are multidimensional rather than uni-dimensional.

#### Phase II

In Phase II, the analyses performed in Phase I will be repeated in order to cross-validate the original findings regarding the structure of the questionnaire. In addition, correlations will be calculated between individual answers and scale scores from the focus subject to individual answers and scale scores from the verification individuals. This information will be broken down by type of relationship to see if results are different from subordinates, peers and supervisors. This data will be used to assess the degree of agreement between self-reports and external reports. ANOVA's will be employed to analyze the magnitude of differences between the focus subjects and the verification subjects. This data will be used to determine the effectiveness of self-report about diversity attitudes and employed in designing intervention techniques to raise awareness. These analyses will also be repeated to look for differences between the assessment of focus subjects and verification subjects who self-identify themselves as belonging to one of the diversity groups assessed by the questionnaire. In additional, these analyses will be generated between focus subjects who identify themselves as belonging to one of the diversity groups and their verification subjects. It anticipated that at least 50% of the focus and verification subjects will self-identify themselves as belonging to one of the diversity groups. This will enable us to test for differences in perception which arise from membership in one of these groups.

#### LIMITATIONS, FUTURE RESEARCH AND IMPLICATIONS FOR PRACTICE

Self assessment and 360 degree assessment tools are subject to personal bias and the halo effect of the participants. While they provide insight to participants on how they view themselves and how they are viewed by others, one of the limitations to any 360 assessment tool is the fact that the selection of peers to provide feedback is in itself tainted by the selector's bias towards people whom they believe will provide a favorable impression. It is important to recognize that there is no such thing as the innocent eye and all feedback is seen through the socially constructed realities of the individual.

In addition, when working with diversity and inclusion challenges, feedback is also filtered through the perceptions and frame of reference of the individual's primary social identity group experience. i.e. seeing the world as a man or a woman, as a caucasian or person of color. It is important to recognize that each social identity group sees the world differently and each individual within that group has his or her own version of the group and the impression of others. This will inevitably bias perceptions and skew feedback through these filters.

A third limitation could arise as the result of the organization's motivation for having its employees use the assessment tool. If morale is low and people feel pressured to complete a Diversity and Inclusion assessment tool the results can be skewed by the presence of other organizational issues.

Another limitation to the use of a diversity and inclusion 360 Assessment as a tool to embed inclusion, will be the extent to which the organization using the tool will implement follow up actions as a result of the feedback. Ideally the results from the Assessment would be used as a leverage point to cause individual and organizational strategic change efforts to embed an inclusive environment. Failure to follow up would result in individuals gaining insight and yet the organization would be at risk of maintaining the status quo.

The call for future research by Kochan et al. (2003) has yet to be fully answered. Future research is needed to deepen our comprehension of why diversity skills gaps continue to exist. A study that explores demographic differences when responding to the Inclusion Skills Measurement Assessment tool would highlight whether each social identity group, including race, gender, age, sexual orientation and religion would approach the question of skills gaps from a different perspective. Insights gained from this study would highlight additional interventions needed to address intra and inter-group differences.

Turnbull (2005) describes the potential for a law of diminishing returns when individuals and diverse groups approach the conversation about differences and then sense they are crossing the threshold into authentic dialog, causing them to pull back from the precipice at the point when real progress could be made. People are often fearful of having cross cultural discussions. When the discussion becomes too intense people often back away to safer ground. This phenomenon is equally true for other sensitive diversity topics such as gender, sexual orientation and religion.

Implications for managers include the design and evaluation of specific interventions to create a connection between diversity and productivity. The implementation of a tool to identify diversity skills gaps can be a first step in this process. Skills gaps exist at all levels of the organization and diversity awareness training for top leaders is often bypassed in the diversity strategic planning process, with leaders focusing only on strategy and delegating awareness training to other levels of the organization. For effective culture change to occur it is essential to include senior leadership in the identification of skills gaps and diversity awareness training.

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# THE ADVENT OF THE INTERNET AND THE ON-LINE BOOK TRADE: THE ROLE OF MANAGERIAL COGNITION AND THE LIABILITIES OF EXPERIENCE

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#### **ABSTRACT**

This paper examines the role of managerial cognition in shaping the competitive responses of Internet retailers in the used and out-of-print book trade. Using a unique data set that combines self-reported data from 1,926 booksellers with independently reported credit card sales data, the paper reports on the relationship among pricing strategies, experience in the industry, and sales. This analysis indicates pricing strategies vary by the experience of the seller, and that new market entrants were more likely to use the Internet not only as a sales channel but also as an information resource guiding pricing. Those practices more common among least experienced sellers were positively related to sales, suggesting there could be liabilities to experience for storefront book retailers who launch on-line businesses. The dominant logic, shared among experienced booksellers, limited the ability of more experienced firms to recognize, evaluate, and respond to fundamental changes in their competitive environment.

#### INTRODUCTION

Few technological innovations have created as much popular furor as the commercialization of the Internet. The boom in IPOs, twenty-something year-old millionaires, and venture capital icons not only touched the public imagination but also prompted many business schools to hastily revamp their curricula to sate the demand for new courses for the New Economy. The 2000 crash of the NASDAQ, the wave of paper riches to paper rag stories of young entrepreneurs, and the collapse of the IPO market vindicated the skeptical who had argued that old economic rules still applied in the New Economy. Underpinning this lively discourse are more fundamental questions: Does the Internet constitute a radical technological discontinuity? If so, will firms with more industry experience be able to act upon changes in the economic environment resulting from the advent of the Internet?

This paper addresses these issues by extending and testing theoretical work in managerial cognition to the study of the relationship between length of industry experience and organizational decision making during periods of technological discontinuity. Specifically, we explore how the

mental models of managers contributed to an industry-wide dominant logic guiding the behavior of experienced proprietors in the used and out-of-print book trade. This research finds that the logic that served the proprietors of these small firms so well during periods of stability may prevent them from recognizing, evaluating, and responding to fundamental changes in the competitive environment.

In what follows, we review theoretical and empirical research contributing to our understanding of the role of cognition and its relationship to industry experience in organizational decision-making during periods of disruptive impact on the market. We then extend this analysis to the study of the used and out-of-print book trade by demonstrating that the Internet constitutes a disruptive impact on the retail book market that has undermined the validity of the dominant logic on which experienced proprietors have relied. This leads to the formulation of a number of hypotheses concerning the relationship between years of experience and organizational practices and the impact of these practices on sales. These hypotheses are tested in the subsequent section of the paper where we analyze an original data set that matches recently collected survey responses from on-line booksellers with independently collected archived sales and inventory data made available from the company processing the credit card transactions and electronic inventories of these same firms.

#### **THEORY**

There are a number of assumptions underpinning the study of managerial cognition that highlight the importance of decision processes of individual mangers. The first is that a large part of what managers contribute to organizational performance is their ability to filter, sort, absorb, and process complex and ambiguous information (Mintzberg, Raisinghani and Theoret, 1976; McCall and Kaplan, 1985; Starbuck and Milliken, 1988). Interchangeably referred to as knowledge constructs (Walsh, 1995), mental templates (Neisser, 1976; El Sawy and Pauchant, 1986), frames of reference (March and Simon, 1958; Shivastava and Mitroff, 1983; Dunn and Ginsberg, 1986), cognitive maps (Axelrod, 1976; Bougon, Weick, and Binkhorst, 1977; Weick and Bougon, 1986; Barr, Stimpert, and Huff, 1992; Calori, Johson, and Sarnin, 1992), and schemata (Fiske and Dyer, 1985), these mental models help managers interpret reality and formulate strategic responses. Second, the mental models of managers not only help managers determine what information is relevant but these models also guide action (Nisbett and Ross, 1980). Third, managers are assumed to have numerous cognitive limitations that inhibit their ability to filter this information (Miller, 1956; March and Simon, 1958). Thus, to process information efficiently, managers rely upon mental models which simultaneously filter "irrelevant data," and provide a template to analyze the data made salient by the knowledge structure. For the purposes of this paper, we follow Walsh (1995) and refer to knowledge structures to describe the theoretical frameworks that individuals use to process information in a deductive, top-down process (Ablelson and Black, 1986).

Knowledge structures are an essential part of a deductive, theory-driven approach to information processing necessitated by cognitive constraints of individuals and the abundance of information sources and data. Knowledge structures speed problem solving (Mischel, 1981) and help managers evaluate conflicting information (Gioia, 1986), leading to efficiencies in problem solving (Thorngate, 1980). Where knowledge structures can provide efficiencies during relatively static periods, they can lead to a number of errors during period of rapid change.

To the extent that a particular knowledge structure is shared throughout an organization, managers may come to reply upon a "dominant logic" (Bettis and Prahalad, 1995; Prahalad and Bettis, 1986). A dominant logic exists when a particular knowledge structure is found throughout the organization and thus, "governs decision-making processes throughout the firm by producing a mind-set or world view that can be shared across all of its business units" (Lampel and Shamsie 2000: 593-594). Although dominant logic is similar to the notion of routines developed through organizational learning (Levitt and March, 1988), it is distinct from organizational learning in that the logic permeates the entire organization. Whereas organizational learning can occur in specific reservoirs within the organization (Argote, McEvily & Regans, 2003), a dominant logic exists as a result of a unifying view of the organization and its associated behaviors (Bettis and Prahalad, 1995; Prahalad and Bettis, 1986). As a widely accepted framework for understanding organizational behavior, a dominant logic is not susceptible to problems of knowledge transfer and depreciation (Argote, McEvily & Regans, 2003; Darr, Argote and Epple, 1995). Instead, the dominant logic becomes a unifying understanding of how the organization should function when faced with specific problems of a repeat nature (Lampel and Shamsie 2000).

During periods of technological discontinuity decision-making premised on a dominant logic can lead to two types of errors. First, basic shifts in the competitive environment can result in managers discarding important data as irrelevant. Second, even when new data are considered, the dominant logic can lead to a misinterpretation of the meaning of this new information. Firms make sense of information collected through a self-referring process where prior behavior is used as a framework for understanding new information (Lampel and Shamsie, 2000; Cote, Langley and Pasquero, 1999; von Krogh and Roos, 1996). Insofar as previous behavior feedback loops lose their predictive power during periods of discontinuity, the continued reliance on traditional modes of sensemaking can lead to basic errors in interpretation of new data.

Managers sharing a dominant logic are likely to come to very similar conclusions when attempting to interpret a common set of data (von Krogh and Slocum, 1994). Each manager selects and makes sense of the available data within the framework of a knowledge structure and its industry specific content. Managers influenced by the dominant logic adopt a "one right way of doing things" mentality (Lyles and Schwenk, 1992). Thus, the existence of a dominant logic may inhibit the ability of the firm to respond to significant changes in its environment (von Krogh and Roos, 1996).

While the dominant logic has been primarily used to characterize behavioral patterns of individual firms, a dominant logic can be common across firms within a particular industry as well. Managers of firms within similar competitive niches share knowledge structures that shape a shared understanding of competitive boundaries and conditions (Lant and Baum, 1994; Reger and Huff, 1993; Porac, Thomas, and Baden-Fuller, 1989) even when environmental conditions change (Fombrun and Zajac, 1987). The contents of knowledge constructs have their origins in both the industries and firms in which the managers operate (Levinthal and March, 1993). Entrenched routines and practices are reinforced by the firm's past success in a particular industry setting (Levitt and March, 1988). This leads to the construction of content that provides managers within a given industry a common interpretative scheme.

In the case of the book industry, the dominant logic governing the buying and selling of books has remained remarkably stable for most of the twentieth century (Everitt, 1952; Epstein, 2002; Weinstein, 1999). Sellers of out-of-print and antiquarian books gained knowledge about book valuation slowly over a long period of time. This enabled experienced sellers to buy undervalued sleepers from their competitors. The mistake of underpricing books made by less experienced and less knowledgeable sellers provided the experienced sellers the valuable opportunity of buying under-priced books and re-selling them to established customers at the "true" market value. Moreover, the market had shown experienced sellers that out-of-print books gained value over time, providing them an incentive to hold on to books until the right buyer happened to come into their establishment. Thus, there existed within the retail book trade a dominant logic that was pervasive throughout the industry as a result of shared industry experience.

#### The Disruptive Impact of the Internet in the Retail Book Industry

When the Internet first emerged in the 1990s, there was a tendency to overstate its universal impact on the business environment. What is clear, in retrospect, is that the Internet has affected commerce differently depending on the nature of the industry (Globerman, Roehl and Standifird, 2001). In some cases, the Internet constitutes no more than a new supply channel or new information resource. In other cases, the Internet has had a transformative impact by changing the fundamental structure of the marketplace (Rothaermel and Sugiyama, 2001; Standifird, 2001a). As detailed below in our discussion of the retail out-of-print book industry, the advent of the Internet in the book industry has been disruptive.

To assess whether the Internet has changed the competitive environment of the retail book trade, we conducted extensive field research between August 1998 and October 2000 including formal interviews with 21 on-line booksellers, correspondence via e-mail with over 100 on-line booksellers, and informal discussions with another 27 on-line booksellers. In considering the impact of the Internet on the retail book trade, we use Afuah and Tucci's (2000) criteria for determining the disruptive impact of the Internet on a particular industry: 1) the extent to which the Internet creates

new value for customers; 2) the extent to which the Internet disrupts the industry's value chain; and 3) the extent to which the Internet destroys the primary basis for success. Afuah and Tucci's framework incorporates and builds upon earlier theoretical discussions of disruptive technologies and applies them to the Internet. The focus on creating new value for consumers is consistent with Christensen's (1997) notion of disruptive technology. Christensen (1997) identifies a disruptive technology as a technology that fundamentally creates new value for consumers often in ways that are not immediately obvious to mainstream consumers. As detailed below, an example of this might be the out-of-print and antiquarian retail book industry, where the value to consumers has been the increase in the availability of information about book supply and valuation and the ability to quickly locate copies of out-of-print books. While these advantages seem obvious with the benefit of hindsight, they were not readily apparent in an industry that had been stable for nearly one hundred years. The focus on industry value chain and the primary basis for success builds upon Henderson and Clark's (1990) discussion of component and architectural changes respectively. The disruption of value chain activities such as new ways scarce books initially enter into the market place is consistent with component change. Changes in how knowledge in the industry is obtained and deployed is consistent with architectural change as discussed by Henderson and Clark. The advantage of the Afuah and Tucci framework is that it provides a comprehensive framework for understanding the depth of disruption associated specifically with the advent of Internet technologies. Thus, we use the Afuah and Tucci framework to formulate and test hypotheses concerning the relationship between organizational practices and experience and the impact of these practices on sales as a result of the introduction of Internet technologies within the retail book trade.

#### **Value Creation for the Customer**

Consumers of books have been the unquestioned beneficiaries of the advent of the Internet. What was once an uncertain and time-consuming process is, with the Internet, efficient, convenient, and free of cost. In a matter of seconds, the search for most books via the Internet is complete. Rather than being generally restricted to a local area when searching a particular title, the consumer can simultaneously search the stocks of over 10,000 booksellers globally who list their inventories on any one of several services such as abebooks.com, alibris.com, TomFolico.com, and Amazon Marketplace and Z-Shops. The book-buying public has the benefit of being able to conduct a search of these various inventory services simultaneously using meta-search engines as bookfinder.com and addall.com. The end result is that consumers not only can locate specific titles within seconds, but also they typically can choose from a range of editions and prices.

The emergence of these search engines and websites has also led to new dynamics of supply and demand. Whereas supply and demand were once defined by local markets, they are now determined internationally. Many "scarce" collectible titles have proved to be scarce only in the sense that they were hard to find in local bookstores. Consumers now have access to the inventories

of over 10,000 on-line booksellers, and titles that have been collected for decades have proved, in many cases, to be not as scarce as once assumed by virtue of changes in taste and the relatively large number of preserved copies. For these titles, there has been considerable downward pressure on prices. In the case of popular titles with mass publication, the ultimate price paid by consumers a few years after initial publication, even with shipping costs, is below that of what many titles commanded before the Internet due their vast supply. In case of the small minority of titles in which strong demand and scarce supply have exerted upward pressure on prices, most collectors are pleased to have ready access to these titles even at higher prices since previously their ability to purchase these books was either subject to the vagaries of the local market place or an arduous effort. In this way, as well, the introduction of Internet technologies has disrupted the differentiation advantage historically enjoyed by those with significant industry experience.

#### **Disruption of the Traditional Value Chain**

Sellers of out-of-print and antiquarian books have traditionally relied upon their ability to buy books from the book-buying public at large and book collectors, in particular. Aside from garage and estate sales, there were, prior the Internet, few other ways for consumers to bypass bookstores and sell directly to the public. With the emergence of websites and services like abebooks.com and electronic auctions, this is no longer the case. For this reason, individuals with little or no retail experience in second hand and out-of-print books can sell books in the same marketplace where experienced retailers compete. This effectively has contributed to the lowering of barriers of entry for inexperienced book sellers. The costs of beginning an Internet bookstore are exceedingly low. The price of computer hardware is less than \$1,000. Subscription fees to list books on line are as low as zero with a 15 percent commission on sales. Starting inventories can be created from rummaging garage sales and thrift stores. Except for the most established, high-end antiquarian bookstores, most Internet bookstores are undifferentiated as there books appear on the site of web intermediaries side by side with well established businesses. Nor is there a transaction cost advantage accrued by experience sellers. Indeed, established businesses with storefronts may often have higher costs than small Internet sellers who work from their home. Other free services to potential sellers have further reduced the cost barriers for inexperienced retailers. For instance, automated features available through freeware, such as automated author and title fill-in features for books that have International Standard Book Numbers (ISBN) mitigate cost advantages often associated with economies of scale. This system lowers the cost of data entry and therefore allows sellers to list individual items in less than 30 seconds. Thus, while there is a labor-cost advantage of having multiple titles with only one listing, in practice this advantage is negligible, particularly when weighed against the cost of carrying an inventory with multiple titles.

#### **Disruption of the Traditional Basis of Competitiveness**

The traditional basis of success in the out-of-print and antiquarian book industry has been specialized knowledge that enabled proprietors to recognize and value scarce books. Prior to the advent of the Internet, there was no quick or easy way for booksellers to acquire this knowledge. Reference books did not have information concerning the valuation of books priced less than \$100, and the price guides that were available were frequently dated, incomplete, and expensive. Knowledge about books was acquired slowly over long periods of time. Booksellers might begin in the lower value-end of the market and learn about antiquarian books from other booksellers. Sometimes this was a difficult education, as competing booksellers would scout each other's inventories, in the hope of finding under-priced items that they could buy for resale. In other cases, individuals gained knowledge and experience about the book trade by working in other bookstores and then leaving to venture on their own.

The Internet provides easy access to this previously unavailable information. To learn if a book is in print, it is sufficient to simply check its availability from any one of several large Internet booksellers such as Amazon.com. To check the value of out-of-print and rare books, booksellers (and book buyers) simply need to go to a web intermediary like abebooks.com, which contains the inventories of thousands of booksellers. In the short time it takes to search a particular title, a user can learn not only the price of the book, but can often deduce the points that distinguish a rare first edition from a more common later printing. In this way, the advent of the Internet has turned upside down the received wisdom concerning the prolonged nature of knowledge acquisition about the value of books.

In short, the Internet has dramatically increased the value to customers, disrupted the traditional value network of the industry, and has undermined the distinctive competency of traditional booksellers. At the same time that the Internet has restructured the wholesale and retail market for used, out-of-print, and collectible books, it has also called into question the value of traditional knowledge structures and the associated dominant logic guiding the actions of the more experienced firms in the industry. The net effect of these changes has been a fundamental change in the competitive environment of used and out-of-print book industry. To assess the extent to which the dominant logic that has guided the industry may hinder experienced booksellers in managing the disruptive changes in the environment, we test a number of hypotheses related to information gathering, sense-making, and sales behavior.

#### **HYPOTHESES**

Expertise in book valuation and pricing in the out-of-print book trade, in general, and in the rare book trade, in particular, has traditionally been the distinguishing characteristic of the seasoned

bookseller. Uneven knowledge among booksellers created opportunities for arbitrage and wealth creation. Everitt 's (1952: 118) characterization is that of a:

"...disorganized and smooth-running machine...booksellers are apparently always taking in each other's ware, finding a sleeper here, selling it to another dealer, back and forth, as if private customers were the last thing in their minds. But eventually the book reaches the dealer who has the customer."

This centuries-old competitive practice has been eroded as the Internet imposes order on this "disorganized machine" (Epstein, 2001). Indeed so rapid has been the increased transparency and liquidity of the book market that we should anticipate that booksellers fully socialized in this industry through years of experience would be slow to recognize the value of the data produced by a simple Internet book search. This is consistent with the observations of Nisbett and Roos (1980) and Starbuck and Milliken (1988) that knowledge structures provide the basis for determining which information is relevant and which information should be discarded. As a result of the industry's dominant logic, experienced sellers will be slower to recognize the Internet as a potentially valuable information resource for establishing book valuation. Thus, experienced sellers may be less likely to use the Internet as a resource to gauge current supply and price data for selected book titles than their less experienced counterparts.

 $H_{1a}$ : Years of industry experience will be negatively correlated to use the Internet to check book prices prior to listing them on line.

The question remains as to whether the existing dominant logic provides experienced sellers a source of competitive advantage. In other words, these sellers may be correct in not considering the new information currently available via the Internet. Insofar that new market information available as result of the Internet provides important information about change in the marketplace, this same dominant logic might adversely impact the sales of sellers who do not consult the Internet when pricing books. Indeed, the *prima facie* evidence indicates that the Internet has created a virtual spot market for books and such pricing information provided by the Internet is a critical determinant of sales. Booksellers willing to embrace Internet technologies can accelerate the process of acquiring the specialized knowledge needed to recognize and value books to be sold on line. The specialized knowledge developed by checking book prices on-line should have a direct impact on the ability to sell books successfully on line. Thus,

 $H_{lb}$ : The use of the Internet to check book prices prior to listing them on line will be positively correlated to relative sales.

Another error that may result from the existing dominant logic may concern how those with experience in an industry make sense of information when it is available (Lampel and Shamsie, 2000). Experienced booksellers have been conditioned over the years to expect a continued appreciation in book values. Once books go out of print, there is a maximum fixed supply, and over time these books will become scarcer, and, assuming relatively stable demand, will increase in price (Basbanes, 1995). Thus, experienced sellers may feel no particular need to move inventory quickly, but rather will accept a slower movement of inventory as a natural part of the industry. Some obscure books may simply have to sit on a shelf for some time before the right buyers happens along. Less experienced sellers, by contrast, are more likely to reject this dominant logic for a number of reasons. First, they may more easily accept the dynamism of the new spot market for books. Many will have come to age as booksellers in the era of electronic commerce. Second, these inexperienced sellers may have a different view of inventory turnover and appropriate profit margins and they may be more interested in moving inventory quickly than their more experienced and patient counterparts. The dominant logic of experienced sellers concerning inventory turnover will have a direct impact on pricing in that experienced sellers will be far less likely to reduce prices merely to stimulate turn over. Consequently,

 $H_{2a}$ : Years of industry experiences will be negatively correlated to the practice of pricing books below prevailing prices.

As with the use of the Internet to check prices, the consequence of the dominant logic is that experienced sellers will have different pricing practices than inexperienced sellers and this may have an impact on sales. For sellers to compete effectively in a nearly complete market with higher priced books, these sellers must offer titles or services that are sufficiently differentiated to justify a premium. This is difficult for the same reasons that pricing cutting behavior can occur. The Internet is a technology that has had a disruptive impact on the out-of-print book industry in that it has increased the effective supply of scarce books and has devalued traditional sources of competitiveness – knowledge of book valuations. With only a handful of antiquarian bookstores possessing complementary assets in the form of elite reputation, there is reason to expect market competitive pricing practices will lead to higher sales.

 $H_{2b}$ : Pricing books below prevailing prices will be positively related to relative sales.

While information filtering and data interpretation capture specific errors associated with an outmoded industry knowledge construct, research in management cognition indicates the potential for variation in knowledge structures across a variety of domains (Walsh, 1995). The longer a manager's tenure in the industry, the more immersed that individual will be in the knowledge

structure and content of this industry (Lurgio and Carroll, 1985, Wagner, 1987) and the less likely the individual will be able to respond to discontinuous change in the competitive environment. In the book industry, this could manifest itself in a number of ways that could erode the effectiveness of on-line sales efforts. For instance, with less faith in the relevance of the Internet, experienced retailers will focus on past investments in inventory and continue these investment patterns whereas inexperienced retailers, unencumbered by the existing dominant logic, are more likely to adjust their inventory based on feedback from on-line sales. The ability to adjust offerings in response to on-line demand should have a direct impact on the return on value of their on-line inventories for inexperienced retailers as compared to experienced retailers. Thus,

 $H_3$ : Booksellers' tenure in the industry will be negatively related to relative sales.

#### **METHODS**

A unique data set was compiled in collaboration with abebooks.com to examine the business practices and sales of on-line booksellers. In July 2000, abebooks.com sent an e-mail notification to their 6,300 vendors explaining the goals of the research project and inviting them to visit our research website. This site provided background on the study and a link to an on-line survey. We then matched the data collected through our research website with data on the inventory and sales of individual vendors housed at abebooks.com.

Over a seven-week period we received responses from 1,926 on-line booksellers (30.6 percent response rate). Of these we had valid user identifiers for 1,488 firms, which allowed us to match the vendor-provided data to data archived at abebooks.com. Vendors from outside of North America constituted 10.3 percent of respondents.

For the purposes of this analysis, we limited the study to U.S. and Canadian companies that have been abebooks.com vendors for at least 100 days and have at least 1,000 books on-line. We limited the study to North American vendors since only a handful of non-North American firms processed their credit card transactions through abebooks.com at the time of the study. Similarly, we limited the study to booksellers with at least 100 days of experience as abebooks.com vendors because of the need for sufficient sales data from these sellers. We limited the analysis to vendors with more than 1,000 titles on-line since this filtered out hobbyist, collectors, and vendors just beginning to pursue on-line sales.

Based on our analysis of abebooks.com archival data, we calculated that 2,771 firms fit our sampling criteria, of which 882 completed the web-based survey, yielding an effective response rate of 31.8 percent. Of these, 755 vendors processed credit card transactions through abebooks.com. The firms in the sample are small, with an average on-line retail inventory value of \$126,576. Aside from the proprietor, the average firm employs .98 full-time equivalent employees and 6.2 part-time employees.

Though always a concern, there are a number of reasons to believe that sampling bias does not pose a critical threat to the study's validity. An analysis of abebooks.com archival data indicates non-respondents have a higher average book price than non-respondents, but have virtually the same relative sales (Table 1). There remains a question as to whether vendors listing with abe.com are different from Internet book vendors in general. At the time of the data collection, abe.com was the pre-eminent web intermediary, with an estimated 60 percent of all vendors listing on abe.com, and interviews with abe.com management indicated that there seemed no patterns of participation on abe.com among U.S. sellers.

#### **Dependent Variables**

#### Use of the Internet as knowledge resource

Vendors indicated on a five-point scale - never, rarely, sometimes, usually, and always - the extent to which they utilized the Internet to check pricing and availability about individual titles on line.

#### **Check Prices**

This variable, Check Prices, is the dependent variable in the test of H<sub>1a</sub>.

#### **Pricing behavior**

#### **Cut Price**

The variable Cut Price was created to represent vendors who regularly set prices for their books below the prevailing price on line. This variable is coded as "1" when vendors indicated that they set prices below prevailing prices and was coded as "O" when they did not; this latter measure includes vendors who check prices on line but do not cut prices as well as those vendors who simply do not consult the Internet for pricing information. This measure is the dependent variable in the test of  $H_{2a}$ .

#### Relative sales

To measure the consequence of business practices and the sales of on-line vendors we created a measure of relative sales. This figure was calculated by dividing the value of quarterly online sales processed through abebooks.com by the calculated value of the on-line inventory. The numerator in this ratio only includes credit card purchases transacted through abebooks.com.

However, with the possible exception of antiquarian booksellers who may bypass web intermediaries in vendor-to-vendor transactions, the percentage of total on-line sales transacted through abebooks.com or other web intermediaries are assumed to be roughly the same. To account for sales outside of abebooks.com, a number of variables are included in the analysis to control for the use of other on-line sales transactions, adding further precision to our relative sales estimates.

The relative sales estimate has both strengths and limitations. Among its strengths is its precision. Both terms in this ratio are from transactions for which abebooks.com, the vendors, and a bank service verify accuracy. While not a measure of profitability, this measure does reflect an outcome desired in a fixed price market – the sale of goods. The extent to which this measure may be related to the long-term viability of these business and/or the emergence of a new business model are discussed in the subsequent analysis. This measure is the dependent variable in the tests of  $H_{1b}$ ,  $H_{2b}$ , and  $H_3$ .

#### **Experimental and Control Variables**

#### **Vendor Experience**

The experience of vendors is measured by the number of years vendors report being selfemployed booksellers. This measure captures the extent to which a proprietor has been immersed in the dominant logic that emerged over time in the used and out-of-print book industry.

#### **Alternative Distribution Outlets**

Four dummy variables were created to represent whether vendors cross-listed their inventories with each of five web intermediaries other than abebooks.com. The reason for including this statistical control is that some search "bots" pick up multiple listings of vendors, allowing consumers to hyperlink to vendors via services other than abebooks.com. The creation of these dummy variables is intended to control for this eventuality.

#### **Market Segment**

Control variables for market segment were created from the self-report of vendors as to whether they have a general, antiquarian, or specialty on-line bookstore. Generalists offer a multitude of largely popular books. Antiquarian booksellers focus on rare books of historical value, while Specialists focus on a particular type of books (e.g., science fiction). Each represents a distinct strategic type. These variables control for the various strategies pursued by individual book sellers. It may be that a particular strategy involves a stronger commitment (Ghemawat, 1991) and, as such inhibits the flexibility of the seller in future endeavors. The inclusion of these variables helps control

for this possibility. In addition, these variables control for the possibility that some antiquarian sellers may engage in more vendor-to-vendor transactions that bypass abebooks.com credit card transactions than do other bookstores.

#### Days with ABE

We included a measure of the number of days booksellers have been abebooks.com vendors. *Ceteris paribus* the aging book inventories associated with those firms having been working with abebooks.com for a longer period of time should be negatively related to relative sales for three reasons. First, unless otherwise requested by consumers, books most recently listed on line appear first when a consumer's search is initiated. Second, there is substantial price cutting behavior among sellers. Books listed on line, even if price competitive at the time of their original listing, often become uncompetitive on the basis of price over time as new sellers undercut prevailing prices. Finally, vendors tend to list their most sellable items first and these items sell early, often providing booksellers with a large boost in sales during the first months of originally posting their inventories.

The mean and standard deviation of the variables used in the analysis are listed in Table 1.

Table 1: Variable Definitions and Means Standard Deviations in Parentheses			
Variable	Non-respondents (n= 1889)	Respondents (n=882)	
Relative sales (abe.commerce sales/total value of inventory)	.00720 (.00914)	.00726 (.00767)	
Years of experience as a self-employed bookseller		9.20 (8.23)	
Vendor checks prices before listing them on-line – five-point scale (1=never, 5= always)		4.07 (0.97)	
Percentage of vendor usually undercuts prevailing price		45.1	
Percentage of vendors with speciality store (e.g. science fiction, horticulture)		21.7	
Percentage of vendors with speciality store		65.4	
Percentage of vendors with general store		12.9	
Percentage of vendors cross-listing with web intermediary #1		15.2	

Table 1: Variable Definitions and Means Standard Deviations in Parentheses			
Variable	Non-respondents (n= 1889)	Respondents (n=882)	
Percentage of vendors cross-listing with web intermediary #2		33.2	
Percentage of vendors cross-listing with web intermediary #3		70.7	
Percentage of vendors cross-listing with web intermediary #4		29.3	
Average book price	42.82 (117.2)	25.42 (35.89)	
Days with abebooks.com	783.79 (336.11)	799.57 (333.95)	

#### **Model Specification**

To estimate the probability that an Internet book seller will use the Internet as a resource to check prices, we use a linear probability model for an ordered categorical dependent variable:

$$Y = \alpha_1 + \alpha_2 + \alpha_3 + \alpha_4 + \beta_1$$
 (Years of Experience)  $+ \beta_{2[a,b,c,d]}$  (Type of Business)  $+ \varepsilon$ 

In this model, where the dependent variable has four ranked-ordered levels ranging from "never" to "always," the model has four constants represented by  $\alpha_1$ ...  $\alpha_4$ . The primary experimental variable "Years of Experience" is continuous and denotes the number of years the respondent has worked in the used and out-of-print book trade. Type of business is a categorical variable, represented by dummy variables denoting specialty, general or antiquarian bookstore. Business type is included in the model as a control variable since businesses in the same market niche encounter comparable market conditions that might influence business practices and sales. The error term is represented by  $\epsilon$ .

To estimate the probability that an Internet book seller will set book prices below the prevailing market rate, we use a logistic regressions model for a dependent variable:

$$Y = \alpha_1 + \beta_1(Years of Experience) + \beta_{2[a,b,c]}(Type of Business) + \varepsilon$$

The specifications for the independent variables in this model are the same as those in the preceding model.

To estimate the relationship between sales and business practices and experience we use an ordinary least squares regression model:

 $Y = \alpha_1 + \beta_1$ (Years of Experience) +  $\beta_2$ (Years of Experience)<sup>2</sup> +  $\beta_3$ (Check Prices) +  $\beta_4$ (Cut Prices) +  $\beta_{5[a,b,c,l]}$ (Type of Business) +  $\beta_{6[a,b,c,d]}$ (Use of Particular Sales Outlet) + ε

In this model, the dependent variable is a continuous value in dollars and represents the value of credit card transactions of books sold on the Internet. To model the empirical observation that the impact of experience on sales diminishes as experience term increases, we include a squared term for experience. To model the impact of business practices we include two dummy variables. The first indicates whether the vendor checks prices on the Internet prior to pricing books, and the second indicates whether the vendor sets prices below the prevailing market rate. As in the previous models, type of business is represented by dummy variables. Finally, we include dummy variables to represent the use of five web intermediaries or sales outlets as control variables since the use of these are likely to have a secular impact on sales of each vendor.

#### **RESULTS**

We conducted the data analysis in two steps. First, we determined whether there were systematic differences based on experience in the use of the Internet to research book prices (Check Prices) and to set prices below the prevailing market price (Cut Price). In the second stage of the analysis, we examined the relationship among these two practices, years of experience, and relative sales of individual vendors.

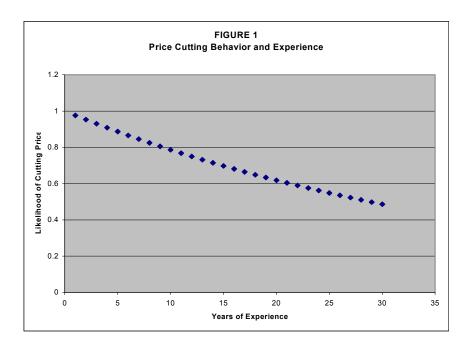
In Table 2 we present the results of the ordered logistic regression in which the five-level ordinal variable Check Prices is regressed on experience and two dummy variables representing specialty and general market segments; antiquarian book dealers are represented in the base of the equation. This model indicates a negative relationship between years of experience and the use of the Internet as an information resource to check availability and pricing, thus providing support for  $H_{1a}$ . In this analysis, we also find that specialty store proprietors are less likely to check prices than antiquarian and general bookstore owners.

Table 2: Ordinal Regression Analysis		
	Model 1 Check Prices	
Constant - Threshold 1	-5.317 (.383) <sup>1</sup>	
Constant - Threshold 2	-3.628*** (.270)	
Constant - Threshold 3	-2.089*** (.237)	

Table 2: Ordinal Regression Analysis	
	Model 1 Check Prices
Constant - Threshold 4	402~ (.223)
Experience	0668*** (.009)
General Bookstore	150 (.213)
Specialty Bookstore	858*** (.240)
N	758
Log Likelihood	651.79
Model Chi-square	79.891***
Cox & Snell Pseudo R-square	0.1
<sup>1</sup> Standard errors in parentheses * p <.05 ** p <.01, ***p <.001	

Table 3: Logistic Regression Analysis	
	Model 2 Cut Price
Constant	073 (.340)1
Experience	024* (.006)
General Bookstore	223 (.240)
Specialty Bookstore	.491~ (.279)
N	751
Log Likelihood	998.59
Model Chi-square	23.292***
<sup>1</sup> Standard errors in parentheses * p <.05 ** p <.01, ***p <.001	

In Table 3, we present the results of the logistic regression analysis in which the dichotomous variable Cut Price is regressed on experience and the market segment dummy variables. In this case, as well, we find a statistically significant relationship between the length of time the proprietors have been self-employed booksellers and the dependent variable, providing support for  $H_{1b}$ . The magnitude of these effects are represented in Figure 1 in which the anti-log of coefficient for Cut Price, multiplied by various intervals of experience measured in years, are plotted against experience level in years. Further extrapolation of the data indicates that a proprietor with two years of experience is 7.53 percent more likely to cut prices than a proprietor with five years of experience and is 37.5 percent more likely to cut prices than a proprietor with 15 years of experience.

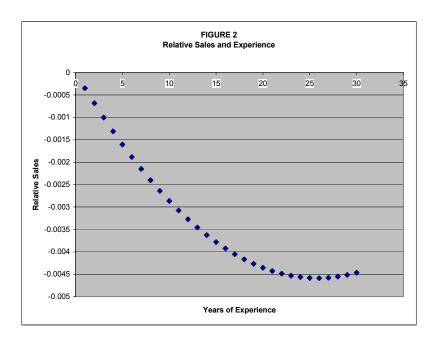


To examine the effects of these pricing practices as well as the general relationship between experience and relative sales, we regressed relative sales on Check Prices, Cut Price, experience, two market segment dummy variables, and four dummy variables representing alternative distribution channels. Further analysis of the relationship between experience and relative sales indicated a non-linear relationship characterized by the flattening of a negative slope with an increase in experience. To account for this, we included a squared term for experience in the model.

In the OLS model presented in Table 4, we find support for  $H_{1b}$ ,  $H_{2b}$ , and  $H_3$ . With regards to  $H_{1b}$ , Check Prices was found to be positively correlated to relative sales (p < .01). The estimate from the OLS model indicates that vendors who engage in price-cutting have 24.7 percent higher relative sales, *ceteris paribus*, than vendors who do not consult the Internet prior to listing books online. The effect is compounded when vendors price items below the prevailing market price since

price-cutting behavior is also positively related to relative sales (p < .01). Independent of the specific business practices represented in the model, experience is negatively related to relative sales. The relationship between experience and relative sales is presented in Figure 2. Further extrapolation of the data indicate that vendors with 5 years experience have a 12.7 percent lower relative sales than vendors with two years experience; vendors with 15 years experience of have a 42.7 percent lower relative sales than vendors with two years of experience.

Table 4: Regression Analysis of Relative Sales <sup>1</sup>		
Determinant	Model 3	
Constant	.0793*** (7.561)	
Experience	376*** (-3.516)	
Experience-Squared	.243* (2.385)	
Check Prices	.106** (2.753)	
Cut Price	.116** (3.109)	
Speciality Store	.176** (3.106)	
General Store	.117* (2.096)	
Alt Sales 1	048 (-1.288)	
Alt Sales 2	.008 (.205)	
Alt Sales 3	164*** (-4.297)	
Alt Sales 4	051 (-1.357)	
Days with abebooks	090* (-2.270)	
F-Statistic Model	11.260***	
Adj. R-square	0.148	
N	648	
$^{1}$ Standardized coefficients, T-statistics in parentheses $\sim p < .10, *p < .05 **, p < .01, *** p < .001$		



As anticipated, a number of our control variables are related with relative sales. Specialty and general bookstores have higher relative sales than antiquarian dealers (in the base of the OLS equation). There are two likely explanations for this. First, antiquarian bookstores are more likely to be less concerned with relative sales per se, since replacing antiquarian books inventory is difficult. Second, antiquarian bookstores engage in more vendor-to-vendor transactions that would typically bypass abebooks.com credit card processing. Consistent with this, alternative sales distribution outlet number three is negatively related to relative sales, indicating that vendors who use this outlet to process a number of transactions via this web intermediary do so by substituting sales that would otherwise be processed through abebooks.com. Finally, as anticipated, days with abebooks.com is negatively related with relative sales (p <.05).

#### **DISCUSSION**

The empirical results from this analysis provide support for the theoretical propositions concerning managerial cognition and decision-making during periods of discontinuous change in the competitive environment of firms. Whereas knowledge constructs and the dominant logic of firms contribute to efficiency in decision-making during periods of stability, the same rules and logic may lead both to filtering out important data and/or the misinterpretation of data during periods of rapid change. In our study, experienced vendors who have been schooled in the stable and fragmented market that characterized the used and out-of-print book industry prior to the advent of the Internet have been slow to appreciate the relevance of market data available through the Internet.

Moreover, even when experienced vendors scrutinized data from the Internet, they were prone to interpret the information according to the rules that governed the pre-Internet marketplace. The dominant logic of the used and out-of-print book industry led experienced vendors to behave as if new data from the environment was either irrelevant or erroneous.

The question remains as to whether the different business practices contributing to higher relative sales of less experienced vendors are sustainable and will ultimately lead to the enhanced economic performance of less experienced vendors. While only longitudinal data analysis will provide a definitive answer to this question, there may be some indirect evidence to suggest that the knowledge structures of experienced proprietors not only shape cognitive processes but may also be associated with adverse long-term economic consequences. The same factors that have made the Internet so disruptive for the used and out-of-print book industry have also disrupted traditional advantages of experienced vendors. As described earlier in our analysis of this industry, the Internet has undermined the value of bookseller experience, which was premised on expert valuation of scarce books and exclusive access to scarce books and markets. At the same time, the Internet has limited the most likely mistake made by less experienced sellers – under pricing scarce books. While inexperienced sellers are more likely to undercut prevailing prices, they are likely not to misprice a scarce book completely now that information about these items is so widely available. In the past, such errors created numerous opportunities for arbitrage for experienced sellers who could easily find sleepers in the inventories of less knowledgeable sellers. In the current market, these inexperienced sellers will verify the value of the item which effectively limits the extent of errors resulting from under valuation. If the item sells quickly, it does so because of competitive pricing practices. While it remains plausible that the relative sales of experienced sellers could be offset by the higher margins of high-end niche sellers, we should note that proprietors in specialist market niches also enjoy, ceteris paribus, higher relative sales.

The extent to which the reliance on an outdated dominant logic proves to have enduring consequences remains an empirical question that we can answer over time. The extent to which the cognitive errors of the proprietors in this study are indicative of the general attributes and liabilities of top-down information processing also is an empirical question only to be answered by more field research on managerial decision making. Booksellers' early adoption of electronic commerce allows us to investigate the initial determinants of economic performance in this industry. Nonetheless, this industry is still inchoate and additional research, particularly longitudinal analysis of experience and firm mortality, will provide a more precise assessment of the returns to experience in this industry.

A critical question concerns the generalizability of the findings of this study. To the extent that the business practices studied here emerge from the cognitive processes of individual managers, there is no basis to assume that experienced managers in large enterprises are any less prone to filter and misinterpret market data that do not fit neatly in their knowledge structures than are the proprietors who are the subject of this study. This is not to suggest that the Internet poses the same challenges to all industries – such is not the case. The cognitive errors of experienced booksellers

are directly related to the dramatic impact that the Internet has had on this industry. At the same time, the book industry is by no means unique.

Any industry where the Internet has the effect of enhancing consumer value through increased transparency and/or market reach and disrupting the traditional sources of success by redefining the nature of industry knowledge is likely to experience cognitive errors of mangers similar to those observed in our study. An example here might include the travel industry where the use of web intermediaries such as Travelocity.com and Expedia.com has substantially increased transparency and, in the process, eroded the traditional value added by individual travel agents. An additional example might include the market for antiques and collectables where web intermediates such as eBay.com has dramatically increased market reach and subsequently reduced the traditional source of success based on the ability to acquire and price scare items. Given the high concentration of small proprietor-operated businesses in these sectors, the consequences of business failure go well beyond narrow financial measures.

A potentially important implication of the analysis is the finding of a dominant logic that appears to be pervasive throughout the used and out-of-print book industry, suggesting that a dominant logic can emerge even in the absence of specific interorganizational connections. Although institutional influences assume a certain level of "connectedness" within a particular industry (Standifird, 2001b), a dominant logic does not assume connectedness but, instead, emerges as a result of a shared experience of successful behaviors. Thus, even in the absence of overarching normative or cognitive influences (DiMaggio and Powell, 1983), we may see a certain level of isomorphic behavior based largely on the shared experiences of firms. The retail book trade has experienced relative stability for decades prior to the advent of the Internet technologies. For this reason, we do not find it surprising that experienced sellers should share similar notions about their competitive environment. A question remains as to whether a dominant industry logic might permeate less entrenched industries; this is a potentially interesting question that can be only answered through further research.

In this particular analysis, we sought to explore how knowledge structures and content have contributed to a dominant logic guiding the behavior of experienced proprietors in the used and out-of-print book trade. While the dominant logic has been primarily used to characterize behavioral patterns of individual firms, we argue that a dominant logic can be common across firms within a particular industry as well. Through the analysis of field interviews and a multi-sourced data set, we find that the dominant logic that served the proprietors of the used and out-of-print book trade so well during periods of stability may prevent them from recognizing, evaluating, and responding to fundamental changes in the competitive environment.

Distinctive in its own right, retail booksellers are far from alone among companies seeking to expand their businesses to the wake of technological change. The relevance of the early experience to these on-line book retailers for other business is a theoretical and empirical question yet to be answered. Still, the results of this particular analysis suggest that the existence of an

industry-wide dominant logic can have a significant impact on the ability of experienced firms to recognize, evaluate, and respond to fundamental changes in the competitive environment. Thus, the existence of an industry-wide dominant logic can have a significant impact on the ability of organizations within a particular industry to navigate the winds of technological change.

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## METHODOLOGICAL TRADEOFFS IN DEVELOPING CORE COMPETENCE RELATED THEORY: THE VALUE PROVISION SITUATION

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#### **ABSTRACT**

This article reviews methodological tradeoffs inherent in developing theory related to core competencies. Integrating the position and resource-based views of strategy, it presents an argument that such theoretical development will occur through researching corporate value provision situations encompassing a nomological network of core competencies, the corporate processes they enable, and the customer value delivered by these processes. Next, it briefly discusses phenomena included within this network. Then, the article reviews the applicability of three classes of methodologies to this nomological approach: 1) Field research, including interviews and observation; 2) Survey research; and 3) Unobtrusive research, including document analysis and analysis of existing statistics. Finally, it identifies issues that arise from using these methodologies to develop competence related theory.

#### INTRODUCTION

The increasing complexity of customer demands has forced corporate managers to identify the tools they possess that can enhance their firm's competitiveness. The Resource-Based View of the firm aids managers with its concept that firms possess various competitively useful resources. This view has emerged (Barney, 1991; Barney, 2001; Collis & Montgomery, 1995; Conner, 1991; Conner & Prahalad, 1996; Dierickx & Cool, 1989; Peteraf, 1993; Wernerfelt, 1984) because it has been noted that some firms are able to apply physical, legal, and knowledge resources to compete successfully over time in a variety of environments.

As discussed below, there is much research concerning an organization's knowledge resources in the form of core competencies, which are its employees' abilities that enable the firm to compete when utilized. According to von Krogh and Roos (1995), the result has been a greater intuitive, anecdotal familiarity with corporate employees' competencies rather than a systematic understanding of them. They point out that "the term competence is often used similarly to the way it is used in our daily speech; to code a broad range of our experiences related to craftsmanship, specialization, intelligence, and problem solving. As such, competence remains an experience-near

concept which needs further conceptual clarification if it is to serve the purpose of theory building" (p. 62).

#### NOMOLOGICAL NETWORK: THE CORPORATE VALUE PROVISION SITUATION

Rather than occurring alone, however, core competencies exist within a set of organizational phenomena. This set can be expressed in a nomological network of strategic concepts. Using this network to research core competencies can lead to a competence related theory, providing a systematic, rather than anecdotal, conceptualization of what core competencies contribute to corporate effectiveness.

Underlying such an argument for competence-related theory is the assumption that there are enduring social phenomena within and outside of the corporation which influence a core competence's contribution. Some of these phenomena occur within the corporation itself, while others occur outside of it.

The dynamic of this nomological network is that the corporation's core competencies are applied to operate its processes, which deliver its products and services. These in turn provide customer value, such as transportation or health care, to customer segments served by industries and economic sectors. Therefore, in this approach, the ultimate contribution of the corporate core competence, mediated through corporate processes, is its influence upon customer value and this value's impact upon the customer segments, industries, and sectors to which it is provided. As this occurs, this set of phenomena can be viewed as a *value provision situation*, as shown in Figure 1.

Environment:

 Sector
 Industry
 Segment
 Customer
 value

Corporation:
 Core Competencies
 Processes
 Products and services

Figure 1. Value Provision Situation

Moving from the innermost to the outer circle of Figure 1, we now review the phenomena occurring within the value provision situation.

#### **CORE COMPETENCE**

In the years since Prahalad and Hamel (1990) published their article entitled "The Core Competence of the Corporation," much work has been done to develop the core competence construct. Researchers have proposed definitions of it from a variety of perspectives. The current state is an inconclusive literature with respect to understanding this important construct.

Perhaps the central problem of core competence definition has been one of balance: trying to include within the definition of core competence both the notions of *knowledge* (know-how) and *action* (skill application) simultaneously (Bogner & Thomas, 1994; Fowler et al., 2000; Lei 2000; Leonard-Barton, 1992; Pitt & Clarke, 1999; Post, 1997; Sanchez et. Al, 1996; Walsh & Linton, 2001). Perspectives vary as to what people holding a competence know and what the competence enables them to do.

Emphasizing the knowledge a core competence embodies, one perspective holds that this kind of competence involves understanding of some intellectual discipline or topic (Bakker et al., 1994; Banerjee, 2003; DeCarois, 2003; Guimaraes et al., 2001; Gallon et al., 1995; Grandstrand et al., 1997; Hafeez et al., 2002; Henderson & Cockburn, 1994; Petroni, 1998; Prahalad & Hamel, 1990; Walsh & Linton, 2001). For example, Henderson and Cockburn (1994), in an extensive study of the pharmaceutical industry, found that research specialists in these firms often have in depth knowledge of disciplines such as molecular biology or biochemistry. The authors also found these specialists to have deep expertise in specific topics such as diseases.

A second perspective advanced by other studies states that a core competence involves knowledge of some specific phenomena (e.g. Gallon et al., 1995; Goddard, 1997; Grandstand et al., 1997; Hafeez et al., 2002; Henderson & Cockburn, 1994; Leonard-Barton, 1992; Lorenzoni & Lipparini, 1999; Meschi & Cremer, 1999; Miyazakil, 1999; Onyeiwu, 2003; Prahalad & Hamel, 1990; Walsh & Linton, 2001). Examples of these phenomena can include chemicals, steel, electronics, or engines.

A third perspective defines a core competence to include a technology, or a skill in using a technology (Bakker et. al, 1994; Bogner & Thomas, 1994; Drejer, 2001; Drejer & Sorenson, 2002; Day, 1994; Duysters & Hagedoorn, 2000; Grandstand et al., 1997; Gorman & Thomas, 1997; Hafeez et al., 2002; Hamel & Prahalad, 1994; Klein & Hiscocks, 1994; Leonard-Barton, 1992; Petts, 1997; Onyeiwu, 2003; Torkkeli & Tuominen, 2002; Walsh & Linton, 2001; Wang et. al., 2004). Examples of technologies can include computing, printing, or internal combustion.

Emphasizing what people holding a competence can do, the fourth perspective suggests that a competence includes functional skills within an organization (Bogner & Thomas, 1994; Bove et al., 2000; Davies & Brady, 2000; De Carolis, 2003; Gallon, et al., 1995; Goddard, 1997; Hafeez et

al., 2002; Harmsen et al., 2000; Javidan, 1998; King & Zeithaml, 2001; Klein & Hiscocks, 1994; Knudsen, 2000; Leonard-Barton, 1992; Meyer & Utterback, 1992; Moorman & Slotegraaf, 1999; Onyeiwu, 2003; Petts, 1997; Snow & Hrebiniak, 1980; Stuart et al., 1995; Thomas & Pollock, 1999; Torkkeli & Tuominen, 2002; Walsh and Linton, 2001; Wang et. al, 2004). Examples of these include marketing, manufacturing, distribution, or production scheduling.

A fifth perspective proposes that a core competence includes an integration of some kind, usually of technical or functional skills (Collis & Montgomery, 1995; Gallon et. al., 1995; Gorman & Thomas, 1997; Grant, 1996; Hamel & Prahalad, 1994; Hafeez et al., 2002; Henderson & Cockburn, 1994; Petts, 1997; Prahalad & Hamel, 1990; Sanchez et. al., 1996; Torkelli & Tuominen, 2002; Wang et. al., 2004). An example would be the Honda Corporation's ability to integrate the functions of engineering and manufacturing to create high quality small engines (Hamel & Prahalad, 1994, p. 204).

A sixth perspective describes a core competence to include more generalized organizational abilities, ones applicable across technologies or functions. Examples include quality management, new product development, collaboration, strategic thinking, foresight, or innovation (Baker et al., 1997; Bergenhenegowen et. al., 1997; Bonn, 2001; Davies & Brady, 2000; Harmsen et al., 2000; Henderson & Cockburn, 1994; Koch, 1997; Major et al., 2001; Meschi & Cremer, 2001; Moorman & Slotegraaf, 1999; Nelson & Winter, 1982; Prahalad & Hamel, 1990; Tucker, 2001; Winter, 2003). It should be noted that controversy exists about the extent to which such generally applicable organizational capabilities actually lie within core competencies or, instead, enable the competencies to develop.

In summary, multiple definitions of core competencies exist. Researchers have proposed that core competencies include knowledge of disciplines, technologies, and specific phenomena; specific skills; and general organizational abilities in strategic thinking and innovation. Some researchers suggest that these bodies of expertise must be integrated by the competence and even that the competence must include some knowledge specific to particular customers.

Examining four manufacturing firms, Edgar (2000) revealed the applicability of nearly all of these perspectives to core competencies. This study used content analysis of corporate documents and interviews with corporate professionals to reveal that the four firms had five competencies among them, all of which exhibited a similar structure. Three of these were based upon an understanding of communication networks, while the other two were found to be based upon understandings of documents and integrated circuits. For an example of a core competence based upon a communication network, see Figure 2.

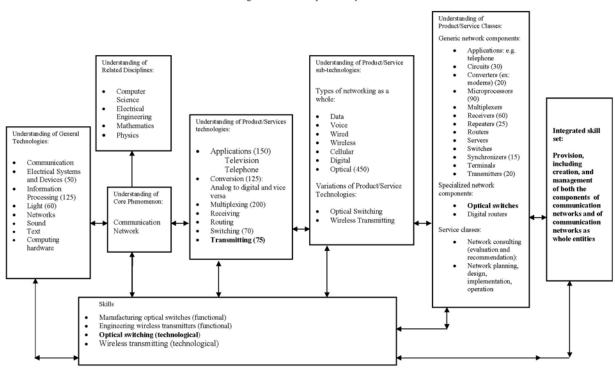


Figure 2: Core Competence Dynamic

The dynamic of the core competence is that individuals within the company possess an understanding of general technologies. This enables their thorough understandings of some core phenomenon and its related disciplines, which then supports their familiarity with product or service technologies and more specific sub-technologies. This in turn leads to their understandings of product and service classes that form the basis for their acquisition of certain functional and technological skills, which are ultimately integrated into a combined skill. It should be noted as well that, once these integrated skills develop, their component skills and understandings can influence one another iteratively. According to Edgar (2000), these understandings and skills were revealed as conceptual categories by content analysis, while the iterative dynamic between them was revealed by the interviews with the corporate professionals.

For instance, understandings of the general technologies of communication and networks led to an understanding of communication network core phenomenon and the related discipline of computer science. This familiarity led to understandings of numerous networking product technologies--such as switching and transmission--and their resulting product sub-technologies, such as optical switching or wireless transmission. This detailed knowledge provided a basis for understanding product classes, such as wireless transmitters, which in turn laid a foundation for

functional skills, such as manufacturing them, and technological skills, such as actually transmitting data wirelessly.

These component understandings and skills contribute to an integrated skill, held by people in several of the examined firms, in the creation and management of communication network components as well as communication networks themselves. Moreover, these components can influence each other iteratively, as occurs when using the skill of engineering transmitters deepens the understanding of transmission technology.

Edgar's (2000) results support several perspectives of core competencies: that they involve knowledge of phenomena, disciplines, and general and product technologies, along with the ability to act by applying singular and integrated skills. (However, the results' focus on the understanding of a specific core phenomenon, such as the communication network, suggests that core competencies do not include more generalized organizational capabilities such as organizational learning or quality management.)

#### CORE COMPETENCE ATTRIBUTES: BREADTH AND DEPTH

Based upon the core competence structure revealed by content analysis, interviews of corporate professionals, and an analysis of corporate patents, Edgar (2000) found that two strategically relevant attributes of the core competence can be described precisely: its *breadth* and *depth*. Competence breadth is the *number of members* of different categories of core competence components. More specifically, it is the number of understandings of different general technologies, core phenomena, related disciplines, product/service technologies and sub-technologies, product/service classes, as well as the number of individual and integrated skills within the core competence. If people within a firm have *any* one of these understandings or skills at all, then that understanding or skill is included in the core competence.

Therefore, whenever a company adds members to any of these categories, the breadth of its core competence increases. If a firm has a core competence based upon the core phenomenon of the communication network and it adds an understanding of the product/service technology of switching or the skill of manufacturing switches, then it has increased the breadth of its core competence. Conversely, if it loses this understanding or this skill, it has decreased the breadth of its core competence. This is depicted in Figure 2. Each understanding or skill is a bulleted item. Adding a new item would represent broadening the competence and vice versa.

In contrast, Edgar (2000) also found that the depth of a core competence consists of: 1) The extent to which people within a company have understanding of the components and subcomponents of the competence's underlying general technologies, core phenomena, related disciplines, product/service technologies, product/service sub-technologies, or product/service classes; and 2) The extent to which they can perform the competence's functional, technological, and integrated skills.

To visualize this see Figure 2. In it, depth information is shown by indicating, in parenthesis next to it, the numbers of patents held by a firm in an understanding or skill. A greater number of patents in a specific area of understanding or skill indicates greater depth of the core competence in that understanding or skill. (Note that most of the understandings or skills did not involve any patents.) For example, with seventy patents based upon it, the corporate employees holding this competence have a reasonably deep understanding of the product/service technology of multiplexing.

#### PROCESS AND PRODUCTS

When value provision situations (as depicted in Figure 1) occur, corporations apply core competencies to provide products and services. In doing so, they have found that the dominant mode of production in the industrial era, segmenting work into extremely small tasks, simply does not meet the dynamism, complexity, and variety of the customer needs within the emerging knowledge society. In their important book *Reengineering the Corporation*, Hammer and Champy (1993) synthesize how organizations are responding. Corporations are reorienting their work into processes, a critical link between core competencies and corporate products.

The opposite of functionally segmented work, processes are integrated combinations of land, buildings, money, equipment, materials, and people which work together repeatedly (Hammer & Champy, 1993, p. 4). Core competencies are applied to perform processes within corporations. As this occurs, core competencies enable processes, and in turn, processes make core competencies "come to life" by creating products or services of value to some customer.

Hammer and Champy delineate different types of processes. These include vendor payment, with activities from the placing of a product or service order to a vendor until final payment of that vendor; order fulfillment, with activities from the placing of an order by the customer until payment by that customer; sales, with activities from initial contact with a customer until placement of that customer's order; and customer service, with activities from notification of the company of a problem by the customer until final resolution of that problem (Hammer & Champy, 1993, p. 118). Other frequently performed corporate processes are research and development, product assembly, and engineering.

As they are performed, processes can vary in several strategically relevant characteristics: their *scale* and *variety*. For instance, order fulfillment can occur over the relatively small area of one building, such as a restaurant, or over the national operations of a major corporation. And processes can vary from the relatively standardized assembly of consumer products such as soaps, to the relatively diverse provision of specialized services, such as the engineering and construction of large buildings.

#### SECTOR, INDUSTRY, SEGMENT, CUSTOMER VALUE

As depicted in the outer circle of Figure 1, the value provision situation encompasses the environment of the corporation. Recent economic changes in developed nations have diversified the products that must be delivered by corporate processes, greatly increasing the competitive pressures upon them. As a result, organizations need a sense of *what* they are competing against, i.e., the competitive place in which they operate. With this in mind, they can find a competitive position within that place in which to thrive. This view has appeal because of the diverse examples of apparently stable competitive environments, such as those in automobiles or in aircraft manufacturing, which have existed for long periods.

Drawing upon strategic planning theories of a firm's opportunities and threats, strategy scholars (Porter, 1980, 1985, 1991, 1998; Tapscott, 1996) have worked to conceptualize competitive place. Their work can be integrated into a classification in which human needs exist at different levels. At the first level exist needs shared by all people, such as ones for health care or transportation. These are met by large groups of organizations known as sectors (Tapscott, 1996, p. 9) of an economy (see Figure 1).

Usually addressed by specific products and services, the second level of needs exists within each first-level one. These are met by smaller groups of organizations (Porter, 1980; 1985; 1991) known as industries (Figure 1). Within the first level need of transportation are several second level needs, such as the need to drive, fly, and take a train. Each of these needs (e.g. to drive) is met by a set of firms comprising an industry (e.g., the automobile industry).

Furthermore, like core competencies, industries exhibit strategically relevant characteristics (Porter, 1985, 1991, 1998). One is their *permeability*, the ease with which an industry allows new competitors. For example, the automobile industry is relatively impermeable, since it costs a vast amount of money for a firm to enter. Strategic theory (Porter, 1985) proposes that an relatively impermeable industry, one difficult to enter, is a structurally attractive one providing strong competitive positions within it for organizations to occupy.

Finally, at a level of aggregation below sectors and industries, there exist small sets of organizations (Porter, 1985, 1991, 1998) serving individual customer segments (Figure 1). For instance, within the automobile industry are firms that serve segments of customers who want high performance sports cars as well as those who want safe, reliable family sedans.

It is at this lower level within industries that firms apply core competencies to processes to deliver products and services. When they do so, their customers realize the value, such as transportation, provided by the sector. As customer value is delivered, the industry and its segments become the environment in which an organization assumes a competitive position.

#### THEORETICAL DEVELOPMENT

Integrating the resource and position-based strategic perspectives, theoretical development related to corporate value provision situations can occur in a series of research stages.

#### **Stages of Establishing Theory**

Research contributes to establishing theory in different ways. First, it describes phenomena and their attributes. Descriptive research, often the first type performed upon any phenomenon, lays the foundation for establishing theory but is limited because it usually does not try to propose relationships between characteristics of phenomena. This kind of research could develop definitions for phenomena within the value provision situation, such as core competencies or industries, and definitions for their attributes, such as a core competence's breadth and depth, or an industry's permeability.

Second, research explores relationships between these attributes. This develops predictive statements describing the pattern by which attributes vary in response to each other; it also develops explanatory, or causal, statements describing why they vary according to such a pattern. Since its result is initial theoretical statements, exploratory research is usually said to build theory. For example, it could develop a predictive statement specifying that broader and deeper core competencies held by firms within a specific industry tend to make that industry less permeable. The explanation may be that the extent of knowledge encompassed by competence breadth and depth is intellectually very difficult to imitate, preventing new firms from entering the industry.

Third, research can refine, or explain these relationships between characteristics in different settings. Since it results in verified theoretical statements, explanatory research is usually said to test theory. At this stage, explanatory research could test this theoretical statement relating competence breadth or depth, and industry permeability across multiple industries.

Explanatory research is in a sense the type toward which the other two types build because once theory has been tested in varied settings and found to describe reality consistently, that theory can be said to be verified. It is important to realize, however, that any theory, even one long established, can still be disproved by a test showing it does not describe reality in some setting.

The result of this theoretical development process is a set of statements predicting and explaining how each phenomenon with a set of them operates internally and interacts with others within the set. In terms of the core competence, established theory would predict and explain relationships between core competence attributes and those of other phenomena (e.g. industries or corporate processes) occurring within corporate value provision situations.

Theory relating attributes of phenomena within the value provision situation is unevenly developed. Some work has been done on stages one and two of theoretical development. For example, industries and their attributes have been examined (Porter 1985, 1991, 1998). However,

relatively little research has examined characteristics of the core competence. Furthermore, few studies have addressed stages two and three of theoretical development: relating attributes of core competencies, such as their breadth or depth, to those of other phenomena within the value provision situation, such as industries' permeability.

#### **Characteristics of Value Provision Situations**

As theoretical development occurs during these stages, phenomena related to the value provision situation can be usefully classified according to three aspects. The first is their dimensionality, indicating their complexity or simplicity. Complex phenomena, known as multi-dimensional constructs, consist of multiple sub-phenomena; conversely, simple, uni-dimensional, phenomena consist of only one phenomenon. The second aspect is the number of values the phenomena's characteristics can assume, indicating their variety or standardization. The third aspect is the specificity of the distances between the values their characteristics can assume. Phenomena whose attributes can assume quantitative, or numerical, values, have some degree of specific increment between these values, though it can be very high to very low. Conversely, phenomena whose characteristics can assume qualitative values have no increment between them. These values cannot be measured because they cannot be said to be increasing or decreasing.

The mechanism through which the core competence makes its contribution, the value provision situation, is itself an example of a complex social phenomenon. It is composed of a number of sub-phenomena: core competencies; corporate processes; products or services; customer value; and the corporation's environment, including its customer segments and industries. Moreover, most of these phenomena within the value provision situation can vary greatly. For instance, corporate processes can operate over vastly differing geographical scales, and the corporate competencies supporting them can vary in breadth, encompassing few or many understandings and skills. Finally, the values its phenomena can assume often differ in their specificity. For instance, the geographic scale of corporate processes can vary in discrete units, such as square miles. In contrast, the type of customer value is not specific at all, since the customer value of health care is not greater or less than that of transportation. Instead, these are qualitatively different from one another.

Variability across these three aspects means that no one research methodology is best for advancing theoretical understanding of the value provision situation. Instead, it is likely that multiple methods must be used, both within individual research projects and across multiple studies.

#### METHODOLOGICAL TRADEOFFS

This section will examine the applicability to corporate value provision of three classes of research methodologies: field research, surveys, and unobtrusive research via a broad review rather

than a more specific critique of each method's potential usefulness. Most of these have been used to study core competencies (Banerjee, 2003; De Carolis, 2003; Drejer & Sorenson, 2002; Granstrand et al., 1997; Guimaraes et al., 2001; Hafeez et al., 2002; Henderson & Cockburn, 1994; Javidian, 1998; King & Zeithaml, 2001; Lorenzoni & Lippanrini, 1999; Meschi & Cremer, 1999; Michalisin et al., 2000; Moorman & Slotegraff, 1999; Petts, 1997; Stuart et al., 1995; Tampoe, 1994; Walsh & Linton, 2001; Yeoh & Roth, 1999).

#### Field Research

#### **Definition**

Involving relatively intensive researcher interaction with the phenomena being studied, field research examines social phenomena and their setting in great depth. Sometimes also called the case study, this class includes two methodologies that will be discussed here: in-person interviews and observation.

#### **Potential Contribution**

Field research is most effective for developing competence-related theory when the value provision situation operates according to certain conditions. Field research methods effectively capture the details of complexity quite well, and so are useful for studying the corporate value provision situation holistically. Interviews can be very effective in describing an entire set of phenomena within a complex value provision situation and the extensive interactions between them, e.g. those between core competencies and corporate processes. This is potentially very useful, since theoretical development related to core competencies is in its early stages.

Interviews and observation would both be effective for examining functional activities of corporate processes if those activities vary extensively. For example, if the activities within a corporate process could be done using relatively varied approaches, such as in engineering service, then these two methods could effectively capture this. Similarly, they can capture the reasons for the generality, or lack of a specific measure, when comparing the different types of customer value, such as transportation or health care, by describing the qualitative rather than quantitative differences between them.

Interviews of corporate employees would be applicable for discovering corporate processes if employees' reported activities correlate with actual activities. This might occur if employees have a very good understanding of the processes in which they participate. Moreover, observation of corporate processes would be useful in the opposite situation, when process participants' reported activities do not correlate with their actual activities.

Since observation can also effectively remove researchers from reliance upon subjects' perceptions, it would be useful for discovering the corporate competencies guiding activities of a process, if those competencies were relatively unclear to corporate employees. This could occur when a corporate competence included relatively many skills; it could occur when the competencies were based upon understandings of varied core phenomena; and it could occur when employees were less deliberate in developing their own individual competencies in light of the larger corporate competencies. In contrast, interviews of corporate employees could be effective in the opposite situation, when the competencies were clear to them.

Similarly, observation would also be more effective if the products, services, types of customer value provided by a firm (such as transportation, or health care), and the customer segments, industries, and sectors served by a firm were relatively heterogeneous and so less clear to corporate employees. Again, though, interviews of corporate employees would be useful in the opposite situation.

Though interviews can be used to study instances of phenomena occurring over long periods of time, human memory is notoriously unreliable, so they capture present reality best. Therefore, interviews are more useful for studying the contribution of core competencies when the processes enabled by the competence occur rapidly and customers use the resulting product or service quickly. In-person interviews and especially observation are relatively physically and financially difficult to perform over large geographic areas, so they are likely more useful if the geographic area of the value provision situation is small, as might occur in a hospital. Finally, given the relatively high costs and physical obstacles involved doing them, in-person interviews and observation are also very effective when a smaller number of employees is studied, as would be true in if a smaller corporate process were being examined.

#### **Surveys**

#### **Definition**

In many ways the opposite of field research, the second class of research methodologies is survey research. Often employing widely known tools such as the Likert scale, surveys present preestablished, open or close-ended questions that do not change during the course of the survey. Involving relatively little researcher interaction with the social phenomena being examined, surveys can be self-administered, where the respondent answers the survey without any contact with the investigator. They can also be researcher-administered, where the respondent answers questions posed face-to-face or over the telephone by the researcher. As defined here, the survey's researcher-respondent interaction is limited: the researcher asks and the respondent answers without further interaction between the two.

#### **Potential Contribution**

Surveys would be useful for building competence-related theory if the value provision situation operates according to certain conditions. Surveys, particularly remote ones with close-ended questions, often simplify what they examine and so must be used carefully when studying the complexity of the corporate value provision situation.

However, they can be effective. Surveys would be applicable for examining functional activities of corporate processes if those activities varied little. For instance, if the operations activities within a corporate process could be done using only relatively few, widely used approaches, such as an assembly line, then a survey could effectively capture that fact.

Surveys can be very useful for examining a specific value associated with a particular phenomenon within a value provision situation, such as the scale of a corporate process. This could be very helpful in the later, explanatory stages of theoretical development, once particular relationships between phenomena must be verified in a variety of settings.

Moreover, surveys would be useful for examining a corporate process if the process' reported activities correlate with actual activities. Some users might have a very good understanding of the process in which they participate, and so surveying them would bring an accurate description of its operation.

Since surveys rely upon human perception of those surveyed, they would be effective for discovering the core competencies guiding process activities, if those competencies were relatively clear to corporate employees. This could occur if a competence included relatively few understandings and skills; it could occur if the firm's core competencies were based upon understandings of similar core phenomena; and it could occur if employees were more deliberate in developing their own individual competencies in light of the larger corporate competencies. Similarly, surveys would also be more useful if the products and services, the types of customer value provided by a firm (such as health care), and the customer segments, industries, and sectors served were more homogeneous and so more clear to corporate employees.

Though surveys can be used to study instances of phenomena as they occur over varying periods of time, human memory is unreliable, so surveys capture present reality best. In other words, surveys would work best when each instance happened relatively quickly in terms of an individual's time frame, so that people's memory of events would be fresh. Therefore, surveys are more effective for studying the corporate value provision situation when the processes enabled by the core competencies occur rapidly and the resulting products and services are used quickly.

Surveys are relatively easy, both physically and financially, to disseminate, so they would probably be especially effective if the geographic area of the corporate value provision situation were large, as might occur in a major pharmaceutical corporation serving customers located throughout the world. Finally, given the relatively low financial costs and physical obstacles in

doing them, surveys would be very useful when many employees are questioned, which might be true if a large corporate process is being examined.

#### **Unobtrusive Research**

#### **Definition**

The third class of research methods, those involving unobtrusive research, contains a variety of tools, including content analysis, the analysis of existing statistics, and the historical method. This discussion will focus on the first two, the analysis of textual, verbal, or even image content items and the analysis of previously gathered statistics. In content analysis, recorded communication is categorized by codes indicative of the phenomena being studied, and then the occurrences of the codes are analyzed. Analysis of statistics is similar to content analysis because it involves systematic examination of numerical rather than textual, verbal, or visual evidence of a phenomenon.

What unobtrusive research methodologies have in common is that they are used to learn about social phenomena by minimizing the interaction between the researcher and the phenomena being studied. This can have the effect of preventing the researcher from influencing the examined phenomena.

#### **Potential Contribution**

This class of research methodologies is located to some extent between surveys and field research in its capabilities. What is learned using unobtrusive research depends upon the content or statistics being analyzed. Such material might be self-reports of human participants in a phenomenon, such as workers' perceptions of a corporate process, or might be evidence created by the phenomenon itself, such as statistics describing the process' performance.

Its enormous flexibility makes unobtrusive research useful for studying the complex nature of corporate value provision situations. Therefore, unobtrusive research methods can be of use in all three stages of theoretical development, from defining the phenomena within corporate value provision situations to verifying specific relationships between these phenomena within a variety of settings. For example, content analysis can be effective when examining multiple phenomena within a value provision situation, such as core competencies and the processes they enable, or when examining one phenomenon, such as an industry.

Statistical analysis would be effective for examining functional activities of corporate process if those activities were relatively standardized or varied. For instance, whether the activities within a process were done using only relatively few approaches, such as an assembly line, or using relatively many approaches, such as an engineering service, then process metrics could be analyzed. Similarly, content analysis could be used to examine specific differences across phenomena, such

as differing scales of a corporate process, or non-specific differences across them, such as types of customer value.

Moreover, as an intellectual compromise between field research and surveys, unobtrusive methods can be used to examine phenomena within the value provision situation across a wide variety of conditions and can provide a rich, robust understanding of a phenomenon. They would be useful for discovering corporate process if the process' reported activities correlate highly or very little with actual activities. For instance, some employees might have only a partial understanding of the processes in which they participate. Analysis of their self-reports might somewhat reflect process activity but also need to be balanced by analysis of process metrics.

Since unobtrusive methods may or may not rely upon human perception of participants, they would be effective for discovering the corporate competencies guiding the activities of a process, regardless of the competencies' clarity to corporate employees. A firm's core competencies might be clear to its employees because they include relatively few understandings of technologies or skills; they are based upon understandings of similar core phenomena; and the employees are very deliberate in developing their own individual competencies in light of the larger corporate competencies. In this case, content analysis of internally developed corporate product catalogs would likely identify the company's core competencies. However, content analysis of external documents, such as trade journal articles on the corporation's products, could do so in the opposite situation as well, when a firm's core competencies were not as clear to its employees.

Similarly, the unobtrusive method of analyzing internal corporate marketing plans would be useful for discovering the environment of the corporation if the products and services, types of customer value provided by a firm (e.g. transportation, or health care), and customer segments, industries, and sectors it served were relatively homogeneous and thus clear to corporate employees. Again, however, content analysis could do all this in the opposite situation, by analyzing external documents, such as consultants' reports.

Unobtrusive methods can be applied to study instances of phenomena occurring over varying periods of time, but because they necessarily involve some record that has already been done, they capture past reality best. Therefore, documentary and statistical analysis is useful for studying corporate value provision whether the corporate processes occurred rapidly or slowly and whether the resulting products and services were used soon or long after they are provided.

It is relatively physically and financially easy to gather documents or statistics from geographic areas of varying size, so these methods can be applicable whether the geographic area of the value provision situation is large or small. Finally, depending upon what textual or numerical data is analyzed, unobtrusive research methods are very useful when a large or small number of employees participate in the phenomena being studied.

#### **METHODOLOGICAL ISSUES**

Using the construct of the value provision situation to establish theory related to core competencies raises a number of methodological issues. The first is that the interviews, observation, and the content or statistical analysis of field and unobtrusive research can support examining the complexity, variety, and generality of the corporate value provision situation. As a complement to them, surveys can be used to examine one or two phenomena in these situations, particularly when these occur in standardized, specific ways, e.g. in a corporate assembly process usually operated on a large scale.

The second methodological issue involves human perceptions regarding core competencies, processes, and the corporation's environment. The balance here must be between utilizing the internal familiarity with a firm held by its employees as well as the external objectivity regarding a firm held by outsiders, such as journalists or consultants. Here, interviews and surveys of corporate employees can supply the intimate internal corporate perspective of core competencies and processes, while observation and content analysis of independently produced documents can bring the external perspective of knowledgeable outsiders.

The third issue involves human memory regarding the operation of value provision situations. The longer such situations take to occur, the more difficult it is for people to remember events accurately, and vice versa. To address this, interviews, surveys, and observation are more useful if value is provided rapidly to customers, while documentary and statistical analysis are more helpful if it takes a long time for value to be provided by applying core competencies to corporate processes.

Roughly approximating the physical effort and cost required to use a methodology, the fourth and fifth methodological issues involve the geographical area over which the value provision situation occurs and the number of employees holding its competencies and operating its processes. In general, the less expensive, remote methods--surveys, and documentary or statistical analysis-serve best if the geographical area and number of employees is large. In contrast, the more expensive, in-person methods--interviews and observation--are better if this area and number are small

#### **CONCLUSION**

Providing value to corporate customers through the application of core competencies involves the interactions of a series of phenomena that can be expressed in a nomological network. Encompassing organizational resources and a corporation's competitive environment, the value provision situation represented by such a network is an enormous social phenomenon, and a number of different methodologies can be used to study it. With field research at one end, unobtrusive

research in the middle, and surveys at the other end, these methods exist along a continuum relative to their ability to address a number of methodological issues inherent to corporate value provision.

Additionally, given the relatively undeveloped theoretical understanding of corporate value provision, triangulating methods will be vital. One approach for advancing theoretical development would be to use field research first, then to move on to unobtrusive methods, and finally to use surveys. Observation and interviews would do the early, descriptive research, providing further definition to value provision phenomena and their attributes. Unobtrusive methods, especially content analysis, could then be used for exploratory research, proposing relationships between such attributes. Finally, surveys could be used for explanatory research, extensively verifying the proposed relationships.

It is likely, too, that each class of methods could aid in adjacent steps of establishing theory. For example, unstructured interview and documentary analysis methods can be used together in the same study (e.g., Edgar & Lockwood, 2008) for both description and exploring theoretical statements. Utilized over time, all of these methods, with their inherent methodological tradeoffs, can establish the competence related theory called for by Von Krogh and Roos (1995), providing a systematic understanding of how core competencies contribute to their parent firms.

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# STRATEGIC PLAN QUALITY, IMPLEMENTATION CAPABILITY, AND FIRM PERFORMANCE

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#### **ABSTRACT**

This paper extends research on strategic plan quality, implementation capability, and firm performance. Specifically, banks pursue cost leadership, differentiation, and focus strategies consistent with Porter's typology and cost leaders realize significantly higher performance than those that do not pursue a generic strategy. When strategic groups are divided by intensity of the strategic plan quality and implementation capability effort, banks that follow one of the Porter generic strategy types and report both high plan quality and high implementation capability achieve significantly higher levels of performance than their low plan quality and low implementation capability counterparts.

#### INTRODUCTION

While implementation of strategy is critical to firm success, most strategic management models inadequately emphasize the relationship between strategy formulation, quality, and implementation (Day and Wensley, 1983; White, 2008). This lack of emphasis is significant as the capability of an implementation effort is important to the achievement of superior performance (Crittenden and Crittenden, 2008; Noble, 1999; Singer, 2008). Despite this relationship between implementation and performance, often strategic planning becomes a formality as opposed to a vital and implemented process (O'Regan and Ghobadian, 2007). While a sizeable body of literature exists in the area of strategy formulation (Borch, Huse, and Senneseth, 1999; Campbell-Hunt, 2000; Dess and Davis, 1984; Porter, 1980, 1985; Miles and Snow, 1978; Mintzberg, 1988; Robinson and Pearce, 1988), limited research attention has been given to implementation's role in strategic planning success (Chebot, 1999; El-Ansary, 2006; Khalil, Kim, and Shin, 2006; Noble, 1999; Tsai, Fan, Leu, Chou, and Yang, 2007).

This paper examines how the interaction of strategic plan quality and implementation capability impacts performance at financial service firms. In an early study, Burt (1978) identified a link between strategic plan quality and firm performance, but regrettably, subsequent research was not conducted in this area. The present research builds upon Burt's study and advances the strategic management research stream by first identifying firms that follow a common strategic direction (cost leadership, differentiation, or focus), and then by assessing how firm performance is impacted within

identifiable strategic groups as a result of differences in strategic plan quality and implementation capability.

The results indicate that banks convert competitive methods in a way that conforms to a cost leadership, differentiation, or focus generic strategy type. The cost leadership group's performance is significantly different compared to the stuck-in-the-middle strategy group, whereas other strategy group comparisons were found to be not significant. This study is an important first effort to investigate the interaction of strategic plan quality and implementation capability on firm performance. The results indicate that there is a significant performance advantage associated with strategic plan quality and implementation capability. Banks that report both high strategic plan quality and high implementation capability generate statistically superior ROAs when compared to those that report low strategic plan quality and low implementation capability.

#### STRATEGIC MANAGEMENT LITERATURE

Managers of profit seeking organizations strive to maximize firm performance (Rappaport, 1981). Strategic planning enhances firm performance (Bowman and Helfat, 2001) and its implementation is necessary for value creation (El-Ansary, 2006). It can also serve as a tool to engage various members of the organization in the achievement of its goals (Vilda and Canales, 2008). It must be kept in mind, however, that managers often tend to underestimate the difficulties associated with strategy implementation (Speculand, 2006). Strategic initiatives are a key aspect of profitable performance in the financial services industry (Young 1999; Devlin 2000) making this industry appropriate to study. To explore the planning and performance linkage, this section reviews research in the areas of strategic plan formulation and implementation capability.

#### **Strategic Plan Formulation Quality**

Strategy formulation involves mission statement construction and internal and external environmental scanning in a way that leads to the development of a unified set of strategic objectives, goals, and tactics to be pursued by an organization. Early strategy formulation research examined the impact of the sophistication of the planning process on firm performance (Thune and House, 1970; Bracker and Pearson, 1986; Rhyne, 1986). Sophistication was defined differently among studies, including, but not limited to, developing a written plan document for three years forward (Thune and House, 1970), conducting a formal planning process in some manner (Wood and LaForge, 1979), or categorizing the nature of written documentation emanating from the planning process (Robinson and Pearce, 1983).

While inconsistently defined in the early literature, a firm was considered sophisticated if it conducted formalized planning when compared to firms that planned minimally or did not plan at all, and results of these studies were mixed. Some found a performance advantage (Bracker and

Pearson, 1986; Gordon and Sussman, 1997; Rue and Ibrahim, 1998) while others did not (Kudla, 1980; Robinson and Pearce, 1983; Hahn and Powers, 1999). However, a meta-analysis of 34 strategy studies conducted by Miller and Cardinal (1994) concluded that strategic planning provides a performance advantage, citing methodological differences, including the definition of strategy sophistication, as a primary reason prior studies report mixed planning/performance benefits. Within this area of research, only Burt (1978) assessed the impact of strategic plan quality on firm performance. His study of 14 Australian retailing firms found that a high quality strategic plan was significantly associated with high performance, whereas low plan quality did not result in a performance advantage.

As this stream of research matured, the definition of planning sophistication evolved to include the primary steps in the strategic management process, specifically, mission statement, internal and external analysis, strategy formulation, implementation, and control and follow-up (Bracker and Pearson, 1986; Baker and Leidecker, 2001). Although only Burt (1978) studied the quality of an organization's strategic plan formulation effort, the collective strategy sophistication literature suggests that a higher level of sophistication in the planning process is synonymous with a higher level of strategic plan quality.

# **Specific Strategy Types**

Leask (2007) concluded that strategic group research remains a useful and valuable way to classify firms by strategy types. Research has been conducted that identifies how specific strategy types impact firm performance using typologies developed by Porter (1980, 1985), Miles and Snow (1978), and Mintzberg (1988). Porter's (1980, 1985) typology uses cost leadership, differentiation, and focus generic strategies as the basis for pursuing superior performance and research in this area. Several studies found support for a performance benefit (Hambrick, 1983; Dess and Davis, 1984; Miller and Friesen 1986; Calingo, 1989) while others are unable to establish a single-strategy performance benefit (Roberts, Brown, and Parini, 1990, Wagner and Digman, 1997). The Miles and Snow (1978) typology breaks strategic dimension into prospector, analyzer, defender, and reactor components. Research using this typology has examined various aspects of corporate activity, including performance (Short, Palmer, and Ketchen, 2002), technology (Dvir, Segev, and Shenhar, 1993), and market orientation (McDaniel and Kolari, 1987; Matsuno and Mentzer, 2000).

Mintzberg's (1988) model breaks generic strategy types into subcomponents (e.g. differentiation is separated based on image, quality, support). A study by Kotha and Vadlamani (1995) compared this approach to strategic classification to that of Porter (1980, 1985) and determined that Mintzberg's (1988) typology provides greater clarity and descriptive power. While each typology has been the focus of research attention, Porter's (1980, 1985) is the most well known and considered to be superior when separating firms according to strategic pursuit (Bush and Sinclair, 1992; Campbell-Hunt, 2000). Therefore, this research used Porter's (1980, 1985)

framework as a basis for separating firms into strategic groups. In this model, a cost leader is defined as pursuing the lowest cost structure among competitors, a differentiation strategy is the process of providing a service or product to the market in a way that customers feel is unique, and a focus strategy concentrates on a specific type of customer, product, or geographic market, and may have either a differentiation or cost element. If a firm does not pursue a specific generic strategy, it is considered to be stuck-in-the-middle and will experience lower performance when compared to firms that pursue a generic strategy (Porter, 1980).

While Porter (1980) posited that firms should follow a specific generic strategy, he cautioned that a firm cannot ignore activity related to other strategy types. For example, a cost leader cannot ignore differentiation activities. Other research has shown that it is possible to pursue a strategy that includes both cost and differentiation competitive methods (Miller and Friesen, 1986; Kim and Lim, 1988; Robinson and Pearce, 1988; Roberts, Brown, and Parini, 1990; Bush and Sinclair, 1992; Wagner and Digman, 1997). It may be necessary to pursue a multiple strategy focus (Takala, Sivusuo, Hirvela, and Kekale, 2006), however, to be consistent with Porter (1980) one strategic type must receive primary and the other secondary, emphasis. Parnell (2006) found that this typology remains useful for classifying firms by strategy types.

Another consideration is the appropriateness of a formal planning model given the level of volatility that the firm is facing in its industry. Brown and Eisenhardt (1997) found that a traditional planning model might inhibit firm performance in industries experiencing rapid growth, such as the high-technology industry. For firms in rapidly changing environments, continuous improvisation in the product area must be both current and future focused if a firm is to keep pace with competitors, and therefore, traditional planning models may not translate into successful performance outcomes. Further, Ormanidhi and Stringa (2008) found that Porter's model provides insight and convenience of use for analyzing competitive behavior by strategy types. Since banking is considered a mature industry in which most product and service offerings are not rapidly changing, using Porter's (1980) traditional planning typology is appropriate.

# **Implementation**

Implementation is the system-wide action taken by firm members aimed at accomplishing formulated strategies. Implementation is important to firm performance because strategies do not add value unless properly implemented (Heide, Gronhaug, and Johannessen, 2002; Noble, 1999). Heracleous (2000) notes that strategy research fails to examine the capability of a firm's implementation effort, and Chebat (1999) suggests that implementation research receives scant attention in the literature for two reasons. First, it is mechanistic and mundane when compared to strategy formulation, and second, it is difficult to operationalize implementation constructs because researchers must ". . . either use elaborate theoretical schemata that cannot be verified through empirical data or observe the managers without validated measurement tools" (p. 107).

Noble (1999) identified a set of 36 implementation studies conducted between 1969 and 1996. He reports that implementation research data are collected by using a mailed survey instrument (22%), by conducting interviews (31%), through field studies (14%), and by case study or undisclosed methods (33%). Among these studies, most variables are related to the implementation process, such as consensus building, information flow, group cohesiveness, control systems, and risk. Dobni (2003) emphasizes the critical role that employee capability plays in the implementation process, stressing that success in this area can become a core competency. In the area of strategic plan implementation, Porter and Harper (2003) contend that managers, employees, and firm infrastructure must be brought together in a way that culminates in a high level of implementation capability, which when accomplished will provide a firm with a core competence.

# RESEARCH OBJECTIVES, METHODS, AND MEASURES

This study explores two primary areas, which are: 1) to identify unique strategy types pursued by banks developed in their strategy formulation process, and 2) to test for a performance advantage between strategic groups based on the level of strategic plan quality and implementation capability. In order to examine these issues, the research examined banks operating in the New England Federal Reserve banking district, a setting that provides a competitive landscape driven by technological advances and interstate banking, which interact to provide fertile ground for new entrants and substitute products. As a result, this study is set in a dynamic marketplace that lends itself to fruitful testing of strategy formulation and implementation concepts.

Since it has been more widely used in research than other available models, Porter's (1980, 1985) typology of strategy formulation is used as a basis for operationalizing strategy types in this study. Prior research (Dess and Davis, 1984; Robinson and Pearce, 1988; Bush and Sinclair, 1992; Kumar, Subramanian and Yauger, 1997; Borch, Huse and Senneseth, 1999) identified all three of Porter's (1980, 1985) generic strategy types in research in manufacturing industries. Based on this literature, the first and second hypotheses are:

- H1. Competitive methods employed by banks will conform to a cost leadership, differentiation, or focus strategy type.
- H2. Banks that pursue a cost leadership, differentiation, or focus strategy will realize higher performance than banks that do not follow one of these strategy types.

Based on the strategic plan formulation and implementation research cited in the previous section, additional research hypotheses are:

- H3. Banks following a generic strategy type with high strategic plan formulation quality and high implementation capability will realize superior performance when compared to banks following a generic strategy type with low strategic plan formulation quality and low implementation capability.
- H4. Banks following a generic strategy type with high strategic plan formulation quality and high implementation capability will realize superior performance when compared to banks following a generic strategy type with low strategic plan formulation quality and high implementation capability.
- H5. Banks following a generic strategy type with high strategic plan formulation quality and high implementation capability will realize superior performance when compared to banks following a generic strategy type with high strategic plan formulation quality and low implementation capability.

Additionally, as an extension of the strategic planning literature related to strategic plan formulation quality and implementation capability research cited in the previous section, we investigate the following hypothesis:

H6. Banks that follow a cost leadership, differentiation, or focus strategy type and report both high strategic plan formulation quality and high implementation capability will achieve superior performance when compared to banks that follow the same strategy type but do not report both high strategic plan formulation quality and high implementation capability.

Table 1 sets forth the 26 competitive method measures used to test the first hypothesis, which were drawn from prior studies (Dess and Davis, 1984; Kim and Lim, 1988; Robinson and Pearce, 1988; Bush and Sinclair, 1992) and adapted to the banking industry using a panel of experts for the purpose of determining if firms follow a generic strategy conforming to Porter (1980, 1985). Generic strategies are defined as (1) cost leadership, which is the employment of competitive methods intended to achieve the lowest cost of operation in a given industry, (2) differentiation, which is the process of providing a service or product to the market in a way that customers feel is unique; or (3) focus, which concentrates on a specific type of customer, product, or geographic market, and may have either a differentiation or cost element.

The measure used to test performance is return on assets (ROA) since it is a primary banking industry performance measure (FDIC, 1995), and it provides a basis for relating this study to previously conducted strategy research (Lenz, 1980). Since ROA is one form of ROI, use of this measure is consistent with Porter's (1980, 1985) suggestion that ROI is an appropriate performance

measure. Based on prior research, ROA is defined as net income divided by total assets (Lenz, 1980; Robinson and Pearce, 1988; Bernstein, 1993). The ROA performance measure used in this study was provided by bank respondents in accordance with previous strategy research practice (Robinson and Pearce, 1988; Lyles, Baird, Orris, and Kuratko, 1993).

The strategic plan quality and implementation capability measures were obtained using perceptual measures in a manner similar to the performance "versus competitors" and performance "versus goals/expectations" responses as employed by Pleshko and Souiden (2003). Perceptual measures are appropriate when objective data cannot be reasonably obtained from study participants due to lack of availability or because they are confidential and managers are reluctant to provide important data (Beal, 2000; Homburg, Krohmer, and Workman, 2004), and also because perceptual measures have been found to correlate strongly with same firm objective measures (Pearce, Robbins, and Robinson, 1987). Such measures have been used successfully in previous strategy research (Pearce and Robinson, 1988; Sarkar, Echambadi, and Harrison, 2001; Pleshko and Souiden, 2003) where they have been found to be highly correlated with objective measures (Pearce, Robbins, and Robinson, 1987; Pleshko and Souiden, 2003). Studies employing perceptual measures used either a 5-point Likert type scale (Homburg, Krohmer, and Workman, 2004; Sarkar, Echambadi, and Harrison, 2001; Strandholm and Kumar, 2003) or a similar scaling procedure with five data groupings, for example top 20%, next 20%, middle 20%, lower 20%, and lowest 20% (Robinson and Pearce, 1988) which are easily convertible to Likert type scaling.

In banking, regulatory authorities, independent auditors, and consulting firms (e.g. Golembe and Sheshunoff) provide information to bank managers useful for developing insight into the quality and efficiency of competitor firm operations and performance. Since the President/CEO is best situated to determine whether or not his or her bank effectively formulates and implements its strategic plan (Greenley, 1983), perceptual measures obtained from respondents in the areas of strategic plan formulation quality and implementation capability provide responses useful to examining the research questions.

To obtain a President/CEO's assessment of the effectiveness of his/her bank's strategic planning effort, the following two questions were adapted from Robinson and Pearce (1988): 1) How do you feel your bank performed when compared to competitors in the area of strategic plan formulation? and 2) How do you feel your bank performed when compared to competitors in the area of implementation of your strategic plan? The scale used for this aspect of the study asked respondents to rank their position among competing banks in 20 percent increments (top 20%, next 20%, middle 20%, lower 20%, lowest 20%) consistent with a method employed by Robinson and Pearce (1988).

#### RESULTS AND FINDINGS

A survey instrument used in prior research and adapted to the banking industry using a panel of experts was mailed to the CEOs at 441 banks with total assets between \$10 million and \$1.5 billion operating in the six New England states. Ninety-four usable questionnaires were returned resulting in a response rate of 21.3 percent, exceeding the response rate in similar studies Robinson and Pearce (1988) and Kotha and Vadlamani (1995). A Chi-Square test indicated that there is no bias between states represented in the total bank population and the study sample, and a wave analysis procedure using ANOVA provided evidence that there is no significant difference between responses returned prior to and after a postcard reminder was mailed.

Performance and bank size was examined by separating banks into three groups with assets of up to \$100 million, \$101 to \$500 million, and more than \$500 million. An analysis using ANOVA indicated that size effects are not significant within the sample. To determine respondent strategic planning capability, the survey captured information on the person completing the questionnaire (for 93 percent of the returned surveys the respondent was the president or CEO) and the years of strategic planning experience (for all respondents the average planning experience was 11 years). This suggests that those completing the survey are qualified to provide information appropriate to the intent of the study.

# **Banking Industry Strategies**

To identify strategy types used by banks, twenty-six competitive method scores (seven-point, Likert-type scale) captured by the survey instrument were subjected to principal components factor analysis (with VARIMAX rotation) using the latent root method. A K-Means clustering procedure was then employed to identify cases that aligned with each strategic group, and to strengthen the within-group homogeneity and maximize the between-group heterogeneity of the strategic groups (Singh, 1990; Hair, Anderson, Tatham, and Black, 1995). As a result, variables CM02 (continuing, overriding concern for lowest cost per unit) and CM22 (only serve specific geographic markets) did not vary significantly between clusters based on an ANOVA F-test (p>.05) and were excluded for purposes of cluster identification. The remaining 24 competitive methods differed in terms of cluster association (all with p<.05) and were used to name strategic groups. The 24 competitive methods grouped by cluster association, presented in Table 1, show that banks pursue strategy types consistent with Porter's (1980, 1985) model. Further, these strategy types are consistent with those identified in prior studies in the areas of broad differentiation, focus, and cost leadership (Hambrick, 1983; Dess and Davis, 1984; Miller and Friesen, 1986; Kim and Lim, 1988); customer service differentiation (Hambrick, 1983); and stuck-in-the-middle (Hambrick, 1983; Dess and Davis, 1994; Miller and Friesen, 1986; Kim and Lim, 1988; Robinson and Pearce, 1988), thereby supporting H1.

The Table 1 groupings show that the cost leadership group contains the developing and refining existing services/product offerings variable, which is more commonly associated with a differentiation strategy. Similarly, the broad differentiation group emphasized the "economies of scale through mergers and consolidation" variable and the customer service differentiation group included the variable labeled "outsourcing functions to control costs," each of which are related to cost control efforts. This mixing of strategy variables is not inconsistent with Porter (1980, 1985), as he cautioned that cost leaders should incorporate some differentiation activity and differentiators should maintain some level of cost control in their strategic efforts.

The ROAs of banks included in each of the strategy groups were tested using ANOVA and the results are reported in Table 2. All of the strategy groups report higher performance than the stuck-in-the-middle group (cluster 3) but only the cost leadership group's performance difference is statistically greater (p=.0496) than the stuck-in-the-middle group. Thus, H2 was only partially supported.

	Table 1:Association of Competitive Methods with Generic Strategy					
Strategic Group 1: Broad Differentiation Strategy (n=41) CM06. Economies of scale achieved through merger or consolidation						
CM13.	Strong branch network					
CM14.	Promotion/advertising expenditures above the industry average					
CM15.	Major expenditure on technology to differentiate services/products					
CM18.	Broad service/product range					
CM21.	New product/service Strategic					
Group 2:Fo	cus Strategy (n=13CM03. Narrow, limited range of services/products					
CM22.	Only serve specific geographic markets (related but not significantly so)					
CM23.	Emphasis on marketing of specialty services/products					
CM25.	Services/products offered in lower priced market segments					
Strategic G	roup 3: Stuck-in-the-Middle (n=18)					
CM11.	Following actions of competitors					
Strategic G	roup 4: Cost Leadership Strategy (n=14)					
CM02.	Continuing, overriding concern for lowest cost per unit (related but not significantly so)					
CM04.	Developing and refining existing service/product offerings					
CM05.	Major expenditure on technology based delivery systems to lower costs					
CM09.	Specific efforts to insure a pool of highly trained/experienced personnel					
CM19.	Maintaining lending capacity and flexibility					
CM20.	Major effort to insure adequate deposit availability					
CM26.	Emphasis on training, education, and institutional learning					

Table 1:Association of Competitive Methods with Generic Strategy						
Strategic Gro	Strategic Group 5: Customer Service Differentiation Strategy (n=8)					
CM07.	Outsourcing functions or entering into joint ventures to control cost					
CM08.	Extremely strict service/product quality control procedures					
CM10.	Concerted effort to build the bank's reputation within the industry					
CM12.	Building bank name identification					
CM16.	Extensive customer service capabilities					
CM17.	Innovation in marketing techniques and methods					
CM24.	Services/products offered in higher priced market segments					

Table 2: Strategic Group Performance Testing							
	Strategic Group						
Measure	BDiff	Focus	SIM	Cost	CSDiff	Overall	
ROA Mean	.96	1.22	.88	1.23	.97	1.02	
Standard Dev.	.26	.53	.47	.24	.34	.38	
Number	41	13	18	14	8	94	
T-score	-1.50	1.35	-1.30	3.32	47	.00	
P-value	.14	.20	.21	.006	.65	1.00	

#### Strategic Groups:

BDIF = Broad Differentiation Strategy

Focus = Focus Strategy

SIM = No Generic Strategy (Stuck-in-the-Middle)

Cost = Cost Leadership Strategy

CSDiff = Customer Service Differentiation Strategy

# Strategic Plan Quality and Implementation Capability

Successful strategic planning requires two actions. First, a firm must formulate a plan that sets forth an appropriate strategic direction, and then it must capably employ its available skills and resources in the implementation effort. Based on this premise, it would be expected to find that firms that formulate a high quality strategic plan that is capably implemented will realize superior performance when compared to firms that do not do so. To test our hypotheses, banks within each strategic group were separated based on responses to questions which asked respondents to indicate how their bank performed in the areas of strategic plan quality and implementation capability.

The previously described scale was used to capture their responses and the mean of the responses to these two questions was calculated for each strategic group. A response that was above

the mean was considered to indicate high strategic plan quality or high implementation capability. To test the reasonableness of the self-reported response pattern, the percentage of firms reporting strategic plan quality above and below the mean was calculated. It was found that 43% of responses were below the mean and 57% were above. Likewise, for implementation capability, the sample consisted of 51% below and 49% above this measure's mean. Based on this analysis, the conclusion is that respondents provided responses to the perceptual measures exhibit representational faithfulness in terms of each bank's underlying reality for these two measures.

For purposes of this test, banks (n=9) that are members of a multi-bank holding company were excluded, as it is not possible to tell from the responses to the survey questions whether these banks have direct responsibility for their strategic plans or if costs are allocated among bank members in a manner that resulted in an ROA that was comparable to that of single-bank companies. The remaining 85 banks used in performance testing are either independent or members of a one-bank holding company. These banks are classified into one of four possible categories. These were (1) low implementation capability and low strategic plan quality (quadrant 1), (2) high implementation capability and low strategic plan quality (quadrant 2), (3) high strategic plan quality and low implementation capability (quadrant 3), or (4) high implementation capability and high strategic plan quality (quadrant 4). The number of banks and the ROA for each strategic group, as well as the stuck-in-the-middle group, are set forth in Figure 1.

		Strategic Plan Implementation Capability					
		Low					
	Low	(16) B. Differentiation (4) Focus (9) Stuck-in-Middle (3) Cost Leadership	.87 .93 1.07 1.13	(1) B. Differentiation (1) Focus (2) Customer Service	.84 1.10 1.22		
Quality		Quadrant 1		Quadrant 2			
of							
Strategic		(7) B. Differentiation (1) Stuck-in-Middle	.97	(12) B. Differentiation (7) Focus	1.03		
Plan		(2) Cost Leadership (1) Customer Service	1.26	(6) Stuck-in-Middle (9) Cost Leadership (4) Customer Service	.77 1.20 1.10		
	High	Quadrant 3		Quadrant 4			

Figure 1. Relationship Between Strategic Plan Quality and Implementation Capability

To test H3, H4, and H5, we compare the general differentiation, focus and cost leadership banks in quadrant four (high plan quality, high implementation capability) to banks in the other three quadrants. Stuck-in-the-middle banks were excluded from these tests because they do not following a specific strategy type. As can be seen in Table 3, a t-test shows that banks in quadrant four achieve a significantly higher (p.<.01) average ROA of 1.13% compared to an ROA of .92% for quadrant one banks, thereby providing support for H3.

Table 3: Quality of Strategic Plan and Implementation Capability								
Strategic Group:	Number	ROA Mean	St. Dev.	T-score	p-value			
Tests for H3, H4, and H5. High Plan Quality and High Implementation Capability Quadrant Compared to Other Quadrants:								
Quadrant One	23	.915	.358	-2.91	.00			
Quadrant Two	4	1.098	.289	.16	.88			
Quadrant Three	10	.991	.248	-1.80	.11			
Quadrant Four	32	1.132	.277	.00	1.00			
_	Tests for H6. High Plan Quality and High Implementation Capability Quadrant On A Strategy-By-Strategy Basis Compared to Other Quadrants:							
Quadrant One	16	.871	.335	-1.93	.07			
Quadrant Two 1	.840	n/a	n/a	n/a				
Quadrant Three	7	.970	.204	81	.45			
Quadrant Four	12	1.032	.230	.00	1.00			
Focus:								
Quadrant One	4	.930	.488	-1.30	.28			
Quadrant Two	1	1.100	n/a	n/a	n/a			
Quadrant Three	0							
Quadrant Four	7	1.247	.426	.00	1.00			
Stuck-in-the-Middle:								
Quadrant One	9	1.069	.469	1.94	.09			
Quadrant Two	0							
Quadrant Three	1	.680	n/a	n/a	n/a			
Quadrant Four	6	.765	.380	.00	1.00			

Table 3: Quality of Strategic Plan and Implementation Capability								
Strategic Group:	Number	ROA Mean	St. Dev.	T-score	p-value			
Cost Leadership:								
Quadrant One	3	1.127	.392	32	.78			
Quadrant Two	0							
Quadrant Three	2	1.260	.057	1.53	.37			
Quadrant Four	9	1.199	.206	.00	1.00			
Customer Service	Customer Service Differentiation:							
Quadrant One	0							
Quadrant Two	2	1.225	.389	.45	.73			
Quadrant Three	1	.600	n/a	n/a	n/a			
Quadrant Four	4	1.100	.094	.00	1.00			
Totals:	Totals:							
Quadrant One	32	.958	.398	-1.62	.11			
Quadrant Two	4	1.098	.289	.16	.88			
Quadrant Three	11	.963	.253	-1.46	.18			
Quadrant Four	38	1.074	.320	.00	1.00			

The t-tests set forth in Table 3 did not find a statistically significant difference between quadrant four banks and those in quadrants two (p.>.05) and three (p.>.05). Thus, support for H4 and H5 was not confirmed. Table 3 also shows that banks in quadrants two (high implementation capability/low plan quality) and quadrant three (low implementation capability/high plan quality) generate higher ROAs than the quadrant one banks. While this performance difference is not statistically significant, it appears that there is an advantage to be gained even if a well crafted plan is implemented poorly or a low quality plan is implemented capably.

To examine H6, banks are compared on a strategy-by-strategy basis. To do this, banks in quadrants one, two, and three that follow the same strategy type as banks in quadrant four are compared to see if a performance advantage is evident. As can be seen in Table 3, t-tests show that performance differences for the cost leadership, differentiation, and focus strategy types are not statistically significantly (p.>.05). Thus, on a strategy-by-strategy basis, there does not appear to be a performance advantage associated with high plan quality and high implementation capability among banks pursuing an identical strategy type.

However, even though a performance advantage is not statistically validated, it does not seem coincidental that the quadrant four banks that pursue a broad differentiation (ROA 1.03), focus (ROA 1.25), or cost leadership (ROA 1.20) strategy type each report higher performance than their

quadrant one broad differentiation (ROA .87), focus (ROA .93), and cost leadership (ROA 1.13) counterparts. Consistently, both the broad differentiation and focus quadrant four banks exhibit higher performance than there quadrant one, two, and three equivalents. Only the cost leaders and customer services differentiators experience mixed results in this area. Thus, while tenuous, there appears to be an incremental performance advantage available to banks that develop a high quality strategic plan and then capably implement that plan when compared to banks in other quadrants that follow identical strategy types. The inability to find statistical significance between plan quality and implementation capability within a strategy type might be attributable to the small number of banks available for statistical testing once the sample is subdivided for testing purposes.

#### **DISCUSSION**

For managers, the implications of this study are clear. Formulating a strategy-based, high quality strategic plan that is flawlessly implemented is important to high level performance. In our study, cost leaders do this best, and it does not seem coincidental that they place unrelenting emphasis on insuring a pool of highly trained and experience personnel which is augmented by training, education, and institutional learning.

In summary, this study identified the strategic dimensions of differentiation, focus, and cost leadership consistent with prior research finding. The results reported here find that the performance of those pursuing a cost leadership strategy exceeds that of all other strategy groups and is significantly superior to that of the stuck-in-the-middle group. There was not a significant performance difference for the broad differentiation, customer service differentiation, or focus strategy when compared to the stuck-in-the-middle group.

This study also found a statistically significant performance advantage associated with strategic plan quality and implementation capability. Among the four strategic groups identified in this study, banks that reported both high strategic plan quality and high implementation capability (quadrant four) generated statistically superior ROAs when compared to those that reported low strategic plan quality and low implementation capability (quadrant one). While it may be possible to generate higher ROAs by emphasizing either high implementation capability with low plan quality (quadrant two) or low implementation capability with high plan quality (quadrant three), the results suggest that this is not easily achieved. When performance was examined by specific strategy type, banks in quadrant four were not able to demonstrate a significant performance advantage over banks pursuing the same strategy type in quadrants one, two, and three.

While it is generally assumed that a high quality plan implemented capably is important to firm success, only 44.7% of the respondents indicated that their banks developed and implemented strategic plans at a high level of quality and capability. This finding also suggests that those providing perceptual assessments of strategic plan quality and implementation capability did so in an unbiased manner. An additional finding is that banks pursuing a broad differentiation strategy

are present in each of the four quadrants, but only the quadrant four banks are able to achieve an ROA in excess of the study average.

Since this was a first attempt to isolate a performance advantage associated with strategic plan formulation quality and implementation capability, perceptual data are employed. While this methodology has inherent weaknesses, it is utilized in this study because perceptual information has been successfully employed in prior studies and also because of time and resource constraints. Future studies might consider obtaining strategic plan quality and implementation capability information using a field study or an interview process that will facilitate a more comprehensive approach to understanding the full range of strategy formulation and implementation activities. The sample was limited to one Federal Reserve district, which resulted in small numbers of banks for statistical testing purposes when the sample was divided into strategic plan quality and implementation capability subgroups. Expanding the scope to a national level could sufficiently increase the sample size so that performance testing between strategic subgroups is improved.

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# ECONOMICS OF RESOURCE BASED AND DYNAMIC CAPABILITIES VIEW: A CONTEMPORARY FRAMEWORK

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#### **ABSTRACT**

In strategic management literature, both Resource Based View (RBV) and Dynamic Capabilities Approach (DCA) have gained currency during the last decade. Despite the incredible popularity of these approaches, to date there has been a great deal of confusion about the economic basis of RBV and DCA. Viewing from the prism of unadulterated versions of Ricardo (1817) and Schumpeter (1934), this paper is a modest attempt to (i) provide a conceptual clarity about the rent generation process (ii) integrate RBV and DCA using the contemporary framework. The implications of the framework from strategic management literature are discussed.

#### INTRODUCTION

One of the burning questions in strategic management is how firms attain sustained competitive advantage. Taking cue from Andrews (1971) that firms appraise the internal resources and competencies while formulating strategies, researchers focused on resources and capabilities as primary drivers for a firm's sustained competitive advantage. Following Penrose (1959), a research stream that dominated the strategic management literature consisted of contributions from several scholars in terms of resource based view (RBV) and dynamic capabilities approach (DCA). The intellectual currency for these approaches is coming from Barney (1986,1991), Lippman and Rumelt (1982), Wernerfelt (1984), Dierickx and Cool (1989), Castanias and Helfat (1991), Conner (1991), Mahoney and Pandian (1992), Teece (1980, 1982), Teece, Pisano & Shuen (1997), to name a few.

A literature review of these approaches reveals that each scholar has made an unique contribution to the field, though sometimes there is overlap of the concepts and terminological conflicts. Despite some disagreements about terminology (for review please refer to Teece et al (1997) for DCA and Priem & Butler (2001), Barney (2001) for RBV), strategy researchers are attempting to combine these two approaches viz. RBV and DCA. It is interesting to note that at both the approaches have used the classical economic concepts of rent generation process in their

explanation of sustained competitive advantage. To be precise these are Ricardian rents and Schumpeterian rents. The underling economics of the RBV and the origins of heterogeneity have been emphasized by Barney (1991) while the DCA has incorporated Schumpeterian rents in the explanation of sustainable competitive advantage (Teece et al, 1997).

Let us consider some examples. In their classic paper on dynamic capabilities, Teece et al (1997) have emphatically stated in table 1 that the nature of rents are 'Ricardian" for Resource-based perspectives and 'Schumpeterian' for Dynamic capabilities perspectives (p. 527). While synthesizing the resource based and dynamic capabilities views, in a recent paper, Makadok (2001) mentioned:

"For those who take the Ricardian perspective (Ricardo, 1817) that has been codified into 'resource-based view' (e.g., Barney, 1986, 1997: 138-141: Conner, 1991; Montgomery and Wernerfelt, 1988; Peteraf, 1993; Wernerfelt, 1984), resource-picking is the main mechanism for the creation of economic rent. ..... However, as Mahoney and Pandian (1992) pint out, this Ricardian perspective has been challenged by Schumpeterian perspective (Schumpeter, 1950) that has been codified into a 'dynamic –capability view' (e.g., Amit and Schoemaker, 1993; Dierickx and Cool, 1989; Mahoney, 1995; Nelson and winter, 1982; Teece, Pisano, and Schuen, 1997). This Schumpeterian dynamic-capability view highlights the importance of an alternative rent-creation mechanism—namely, capability building—which is rather different from resource-picking" (p 388).

The purpose of this paper is to bring to the attention to the strategic management scholars that the work at the conceptual level, particularly with regard to rent generation process, requires re-consideration lest it might misdirect the future researchers. Before going further, it is imperative to revisit the Ricardian and Schumpeterian concepts of rents and properly apply these to the sustained competitive advantage. This paper is a modest attempt to unravel the false/inappropriate dichotomy between the processes of generation of rents on which these approaches are based. Taking in the much lighter vein, the scholars of both RBV and DCA have unwittingly misunderstood the very basic concepts of Ricardian and Schumpeterian rents and took a myopic view of the economic bases of rent generation process. When one views from the prism of the unadulterated versions of Ricardo and Schumpeter the contemporary framework emerges emphasizing that both rents are quite indispensable for sustained competitive advantage.

This paper is organized into three sections. First section outlines the traditional approach (i.e. the approaches so far followed). Second section is devoted to the discussion of Ricardian rent and its applicability to sustained competitive advantage. Third section is devoted to the discussion of Schumpeterian rents. Based on the unadulterated versions of Ricardian and Schumpeterian concepts,

a contemporary approach is discussed in the fourth section. The contemporary framework in terms of 2x2 matrix with its implications to future strategic management are discussed in the final section.

#### TRADITIONAL APPROACH

Much has been said about the sustained competitive advantage in terms of both RBV and DCA. Much more have been empirically demonstrated in support of these approaches. Strategic management scholars are now busy integrating both approaches, as if these are totally different, though emerging from the same branch. Before any attempt to go further, it is imperative to look back and verify the foundation of economic basis of both RBV and DCA. It is time to re-consider the economics of RBV and Dynamic capabilities view especially with regard to the dichotomy between Ricardian and Schumpeterian rents. Strategic management scholars so far have been convinced of one simple fact: Ricardian and Schumpeterian rents are mutually exclusive and competitive. Without doubt, to date there is a great deal of confusion about the economic basis of both RBV and Dynamic Capabilities view. A majority of scholars agree with the explanation of RBV through Ricardian rents and emphasize that heterogeneity of resources are the primary cause of economic rents (Peteraf, 1993; Barney, 1991). It is also contended that market-based models (such as Porter's Five-forces model) result in monopoly rents as the firms restrict output taking into account the relative position and behavior of other firms in industry. This being so, the Dynamic capabilities view considers Schumpeterian rents as the economic basis which is a radical departure from Ricardian rents. The traditional thinking is captured in Figure 1.

RBV Ricardian
Rents

Dynamic Capabilities
Approach (DCA)

Schumpeterian
Rents

FIGURE 1.

#### RICARDIAN RENT

Ricardian rent arises because of scarcity (rarity of resources/capabilities). Resources, when valuable, result in low cost and as long as these resources are scarce and available only to some firms, the operating cost will be low when compared to cost of production to other firms. The other competing firms will have to produce at a high cost and the difference between the unit cost of production of competing firms and the lowest unit cost of production of the firms possessing these scarce resources result in economic rent known as 'Ricardian rent'. This can be seen in the Figure 2.

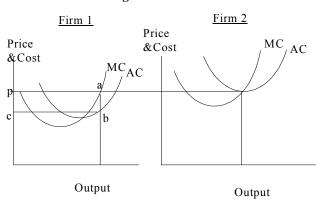


Figure 2. Ricardian Rent

Ricardian rent to the extent of 'ab' per unit of output arises to firm 1 by virtue of scarcity of the capabilities which are valuable. As long as firm2 is not having the resources possessed by firm 1, the firm 2 will have to charge higher price to survive in the market. The difference between the marginal revenue charged by the firm 2 and profit maximizing (equilibrium) level of average cost i.e. b is equal to Ricardian rent. In this sense, Ricardian rent arises by virtue of 'scarcity/ rarity' of the resources which are deployed by the firm. The surplus of revenue over costs here is the area under the rectangle 'pabc' and is termed as 'scarcity rent' (alternatively, the profits).

The concept of rent was originally applied to the land, according to Ricardo in his 'Principles of Political Economy and Taxation (1817)<sup>1</sup>, as the 'payment to the landlord for the use of the original and indestructible powers of the soil' (p.33). Though, on the surface it might appear that rent is a productivity phenomenon, the ultimate rationale is more clearly expressed in terms of productivity and scarcity by Ricardo:

"On the first settling of a country, in which there is an abundance of rich and fertile land, a very small proportion of which is required to be cultivated for the support of actual population or indeed can be cultivated with the capital which the population can command, there will be no rent; for no one would pay for the use of land and when there was an abundance quantity not yet appropriated, and therefore, at the disposal of whosoever might choose to cultivate it.

On the common principles of supply and demand, no rent could be paid for such land, for the reason stated why nothing is given for the use of air and water, or for any other of the gifts of nature which exist in boundless quantity....If all land had the same properties, if it were unlimited in quantity, and uniform in quality, no charge could be made for its use, unless where it possessed peculiar advantages of situation. It is only because land is not unlimited in quantity and uniform in quality and because land of an inferior quality is called into cultivation, that rent is ever paid for the use of it. When, in the progress of society, land of the second degree of fertility is taken into cultivation, rent immediately commences on that of the first quality, and the amount of that rent will depend on the difference in the quality of these two portions of land.

When land of the third quality is taken into cultivation, rent immediately commences on the second, and it is regulated as before by the difference in their productive powers." (pp. 34-35).

Thus, Ricardo used 'scarcity' as the root cause for the existence of 'rent'. Ricardo (1817) contends that 'possessing utility, commodities derive their exchangeable value from two sources: from their scarcity, and from the quantity of labor required to obtain them' (p.5). The statement that "all land had the same properties, if it were all unlimited in quantity, and uniform in quality, no charge be made for its use, unless it possesses peculiar advantages of situation" refers to 'differential rent' according to Ricardo.

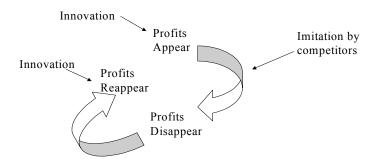
#### **SCHUMPETERIAN RENT**

In a sharp contrast, Schumpeterian rent arises by virtue of non-imitability of innovation (capabilities of competing firms) and non-substitutability of the capabilities a firm possesses and develops over a period of time. This can be seen in the following sequence. According to Schumpeter, profits to entrepreneur arise because of innovation (strategies) and as long as imitators are not available to imitate the innovation, entrepreneur continues to enjoy the profits. When imitators come into existence, profits get evaporated. Entrepreneurs continue to search for new innovations. Thus, profits (rents) appear (when innovations are new), disappear (when imitators imitate the innovations), and reappear (when new innovations take place). In this cycle of profits

appearing, disappearing, and re-appearing the 'imitators' play a critical role. Thus, according to Schumpeter, non-imitability gives rise to entrepreneurial profits. To Schumpeter, the dynamic innovations of the entrepreneurial class constitute the most powerful competitive force in any economy. According to Schumpeter (1934):

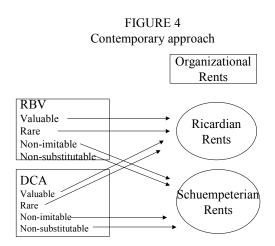
"Stated differently, it is quite possible that short-run semi-monopolistic positions, agreements, and strategies, with accompanying short-run inefficiencies in resource allocation and inequalities of income distribution, are necessary to provide a basis for the innovational investment that brings greater long-run performance and more vigorous long-run competition. Entreprenuership may be, in large measure, a function of an institutional sociopolitical structure which permits protection to the innovator and the generation of pure economic profits through the manipulation of price, quantity, and quality variables via techniques which in the short run appear restrictive and monopolistic. Thus, the possibility of retention, at least temporarily, of above-normal profits from innovations may well stimulate a higher rate of innovation and technological improvement. Short-run strategies and practices that protect the monopoly position of the innovator thus may be the price society pays for technological progress and thereby a higher growth rate over the long run. Moreover, because of the tendency of innovations to spread, by imitation and extension to allied fields, the monopoly position-- and the associated monopoly profits-- of the industrial pioneer is only temporary (pp. xxxvii-xxxviii & p 152). Schumpeterian rents can be understood from the Figure 3.

Figure 3. Schumpeterian rents



#### **CONTEMPORARY APPROACH**

Following Ricardo (1817) and Schumpeter (1934), it can be noted that rents a firm appropriates come from both sources. Figure 4 represents the contemporary approach, which is a radical departure from the traditional approach represented by Figure 1.



The point that there existed a great deal of confusion in making distinction between Ricardian and Schumpeterian rents in strategic management literature is explanatory when Figure 1 and 2 are compared. To make the point more clear and to substantiate this claim that rents comprise of both sources Ricardian and Schumpeterian approaches to rents are revisited. While Ricardian rent is essentially dealing with rent arising from scarcity of resources, Schumpeterian rent is attributed to the non-imitability of the strategies by the competing firms. Often scholars contend that Ricardian rent accrues to RBV while Schumpeterian rent accrues to Capability building approach. Actually in both RBV and Capability building approaches both rents arise. Conceptually, to the extent resources are valuable and rare, the economic rent is termed as 'Ricardian rent' while the rents that arise due to non-substitutability and non-imitability are explained through Schumpeterian rent. According to Schumpeter, rents appear, disappear and reappear in the sense a firm makes rents as long as competitors do not duplicate or imitate the strategies of other firms and when they start imitating then rents disappear. The rents reappear when firms innovate something new (develop new capabilities or acquire new resources that enables a firm to develop capabilities that are valuable, rare, non-substitutable, and non-imitable. Once again, in this process a part of Schumpeterian rents are called Ricardian rents as long as the capabilities become rare (scarce).

#### CONTEMPORARY FRAMEWORK

When we sit through the Schumpeterian and Ricardian rents and see the rent-generation process, contrary to what most of the strategic management scholars believe, RBV & DCA both give rise to both these rents. To be more specific, to the extent rents are due to rarity and value of the resources (and capabilities organizations possess and develop) Ricardian rents are assumed. On the other hand, to the extent rents are due to non-imitability and non-substitutability, Schumpeterian rents are assumed.

### **Organizational Rents (OR)**

These comprise of both Ricardian and Schumpeterian rents. When a firm achieves sustained competitive advantage OR generates as follows:

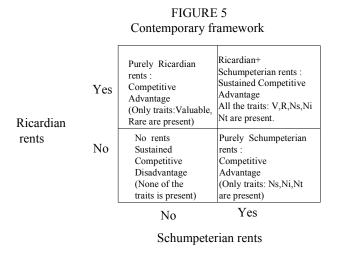
Organizational Rents = Ricardian rents + Schumpeterian rents

The contemporary approach of organizational rents is depicted in Figure 4. The Figure 4 is self-explanatory and it unravels the confusion between Ricardian and Schumpeterian rents and explains that organizational rents comprise of both Ricardian and Schumpeterian rents.

Using the unadulterated Ricardian and Schumpeterian rents, an integrating framework of RBV and DCA can be developed. An attempt to provide a dynamic view of strategic management is not new in strategic management literature. As things stand now, it can be observed that there is a virtual polarization of the approaches, with one approach emphasizing 'industry' (goes by the term 'Porter's Industry analysis'); and 'resources' being the emphasis of the other (goes by the term Resource Based View of Barney and other scholars). Taking RBV as the logical foundation, a group of scholars have attempted to develop a sub-stream calling it Capabilities view (Teece et al, 1997). Digging up the literature reveals the basic paradigmatic approaches to the dynamic view of strategy wherein these basic approaches are dealt with separately. Recently a theoretical model is developed synthesizing the RBV and Dynamic-capability views of rent creation wherein arguments are made that these approaches are complementary rather than competitive (Makadok, 2001). Thus as suggested by Williamson (1991) that:

"The leading efficiency approaches to business strategy are the resource-based and dynamic capabilities approach... It is not obvious to me how these two literatures will play out--- either individually or in combination. Plainly, they deal with core issues. Possibly they will be joined" (Williamson, 1991: 76)

Though some authors consider the resource perspective complements the industry analysis framework (Amit and Schoemaker, 1993: 35), in several important respects the perspectives are also competitive (Teece et al, 1997: 526). However, it should be noted that "slavish adherence to one class to the neglect of all others is likely to generate strategic blind spots" (Teece et al, 1997: 526). Thus, consistence with the suggestions made by strategic management scholars, an integrative framework is provided in the Figure 5.



V= Valuable; R= Rare; Ni = Non-imitable; Ns= Non-substitutable; and Nt= Non-transferable

A cursory look at the framework suggests four cells. Cell 1: This is characterized by 'no rents' at all. This is represented by the absence of both Ricardian and Schumpeterian rents. Firms will not be able to have any competitive advantage and hence no rents. Firms leave the scenario sooner than later. Many new firms that cannot survive for long belong to this category. Cell 2: Purely Ricardian rents: This is characterized by the situation of presence of two or the traits specified by Barney (1991). When the resources/capabilities are valuable and rare, Ricardian rents are said to be accruing to the firms. Firms will be able to enjoy competitive advantage. Cell 3: Schumperian rents: When resources/capabilities possess the traits of non-transferability, non-transperency, and non-imitability, then Schumpeterian rents are said to be accruing to the firms. Cell 4: Organizational rents: When the resources/capabilities possess all the traits specified by Barney (1991), sustained competitive advantage is the outcome. That is to say, organizations will be able to enjoy both Ricardian and Schumpeterian rents.

#### IMPLICATIONS FOR FUTURE RESEARCH

The conceptual clarity of the rent generation process under the contemporary framework would be useful to future researchers who are attempting to integrate both RBV and DCA. Especially in view of the changing landscape of the competition in the twenty first century, calling for industry transformation and suggesting the firms to change the configurations of resources and capabilities to meet the changing demands, the contemporary framework would be much useful. As pointed out by Penrose (1959), environmental changes 'may change the significance of resources to the firm' (p.79). The contemporary framework suggests that the RBV and DCA focus on only a part of organizational rents and firms enjoy sustained competitive advantage only when they are operating on cell 4. The framework would be helpful for the future researchers to integrate both these approaches help them extending the framework to link it to industrial organization view. Such linkage is essential because organizations have to tie the resources and capabilities with what is required in environment i.e. to take advantage of opportunities and reduce threats from environment.

#### **ENDNOTES**

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# REORGANIZATION: CONTINGENT EFFECTS OF CHANGES IN THE CEO AND STRUCTURAL COMPLEXITY

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#### **ABSTRACT**

I employed structural contingency theory, neglected in recent organizational studies, to examine two variables, structural complexity and changes in the chief executive officer in their relationship with an important form of change, administrative reorganization. I found that changes in the CEO and structural complexity significantly influence administrative reorganization. Findings also indicated that organizational size is positively related to reorganization. However, environmental munificence, organizational age, and changes in organizational size did not influence reorganization. I argued for the importance of attending to both internal and external pressures for organizational change.

#### INTRODUCTION

Causes of organizational change have been the subject of interest to many researchers (Bartlett, Ghoshal, & Birkinshaw, 2004; Baker & Cullen, 1993; Haveman, 1993; Chandler, 1962; Hoskisson & Galbraith, 1985; Modarres & Fowler, 2005). Despite the difficulties in its implementation, change seems relatively common and tends to be an integral part of structural redesign, formation of political alliances and shifts in the bases of power (Hall, 2002; Eisenhardt & Bourgeois, 1988), changes in the strategic directions and organizational objectives (e.g., Hoskisson, Hitt & Ireland, 2008), and dynamism in the marketplace (Schilling & Steensma, 2001). Organizations capability to adapt to changing conditions tend to vary. An important area of change concerns with reorganization of administrative framework (e.g., Baker & Cullen, 1993). A number of previous researchers have held to the view that organizational success tends to be contingent on timely reorganization of the administrative framework in response to internal and external environmental conditions (Oliver, 1988; Porter, 1991).

Other researchers have argued that established organizations tend to become inert and rarely reorganize (Hannan & Freeman, 1984; 1989). In this view, in the long term adaptation in response to internal and external forces tend to be improbable. Primarily, due to, idiosyncrasies in investment in organization-specific skills, and complexity of the structural arrangements tend to prolong if not inhibit comprehensive reorganization. Moreover, the executives within structurally complex and bureaucratic organizations tend to be constrained by complex interrelated functions and inertia

forces; hence, lack capabilities to institute change (e.g., Haveman, 1993). The other stream of research views organizations as flexible and adaptive to evolving market conditions, and top administrators as capable of implementing change. For example, strategic contingency theorists have drawn attention to the importance of strategic choice in implementation of change under various environmental conditions (e.g., Chandler, 1962; Tushman & Romanelli, 1990).

A number of structural contingency theorists (e.g., Blau, 1970; Chandler, 1962; Galbraith, 1973) have argued that internal contextual factors significantly influence organizational structure and change (see Scott, 1992, pp. 226-283 for an extensive review of this literature). Despite this rich heritage of theory and research, there has been a virtual absence of theoretical or empirical work from a structural contingency perspective in the past 15-20 years, prompting Pfeffer (1997:162) in a recent essay on new directions for organization research to ask the question: "What has happened to structural contingency theory?" In the current research I return to the structural contingency perspective and examine two critical variables omitted in past research, structural complexity and changes in the chief executive officer, in their relationship with an important form of change, administrative reorganization.

#### THEORY AND HYPOTHESES

# **Changes in CEO and Reorganization**

Previous researchers have considered CEOs as symbolic figures in the organizations with marginal impact on change in organizations. Early research by Cohen and March (1974) showed that complex decision-making processes in higher education institutions relegate the chief executive's job to a symbolic and illusive position. As such, changes in the chief executive position tend to be marginal or no influence on existing administrative structure. The symbolic aspects of top executive leadership, however, tend to be rooted in the inertia within decision-making processes. That is, top echelon's commitment to past practices and structural arrangements may also pressure the CEOs to reinforce the commitment to the existing administrative structure and strategic orientation (e.g., Ghemawat, 1990; Tushman & Romanelli, 1990).

Thompson (1967) remarked that complexity of the structure tends to impact CEO's influence on implementation of change. Thompson provided a paradoxical view about the top executive managers' capability to influence change. Given the complexity of certain organizations chief executives tend be constrained by diverse interests, hence, unilateral actions by presidents on significant issues are relatively rare. However, for highly complex organization to adapt new strategic directions in response to a new set of environmental circumstances the top executive's leadership tends to be fundamentally important. Changes in the CEO facilitate a new leadership style that creates opportunities for change and promotes an atmosphere of expectancy about reorganization (e.g., Romanelli & Tushman, 1994). Moreover, new chief executives tend to be

uncommitted to past organizational strategies established by their predecessors, in part, due to differences in their functional background and their perception of environment which tend to influence interpretation of information on organizational effectiveness (e.g., Waller, Huber & Glick, 1995; Dearborn & Simon, 1985; Romanelli & Tushman, 1994). Hence, replacement of top executive tends to have significant consequences for the organization's structure and decision making processes (Pfeffer, 1981).

According to Miller, Droge and Toulouse (1988), CEOs do influence the direction of the organization through redesigning the administrative framework. However, the impact of CEO on administrative framework tends to be through selection of a number of viable strategies and strategymaking processes within any context (e.g., Porter, 1980). Selection of strategic options influences choices of structural designs that can be used to support and implement CEO's strategic options. Different strategies require different structural framework (e.g., Miller, 1988), and structures respond to the particular control and coordinative problems created by the strategies and strategymaking processes that are ultimately selected (Nelson & Winter, 1982). Hence, choices of strategies by CEOs require administrative reorganization (e.g., Chandler, 1962; Rumelt, 1986), which permits CEOs to ensure orderly and controlled progress toward their objectives. According to Neilson and McGrath (2007) CEOs tend to make a strong case for change by clearly and persuasively articulating the factors that are driving it. Similarly, Miller, Droge, and Toulouse (1988) remarked that executives make decisions in an intendedly rational way, by performing analysis and consulting frequently with other managers to improve their chances of success. Those activities may, in turn, create a need for structural integration devices to promote consultation and for specialization and controls to provide the expertise and information needed for analysis (e.g., Fredrickson, 1986). Moreover, the new chief executive typically puts in motion a series of actions designed to solidify and institutionalize that executive's power, which has serious consequences for the careers of other high level administrators (Pfeffer, 1981). That is, the new successor is likely to create a new administrative structure by replacing the occupants of high level positions. Hence, reorganization enhances the ability of the new CEO to implement change.

H1: Changes in chief executive officer is positively associated with administrative reorganization

# Structural Complexity and Rates of Reorganization

What impact does structural complexity have on the organizational flexibility or stability? Previous research has made contrasting arguments on the association between structural complexity and change (Path II, Figure 1). The relationship between structural complexity and change may be negative. A number of researchers have argued that high levels of complexity foster decomposition of the structure into quasi-autonomous departments. As such, the suppression of the links across

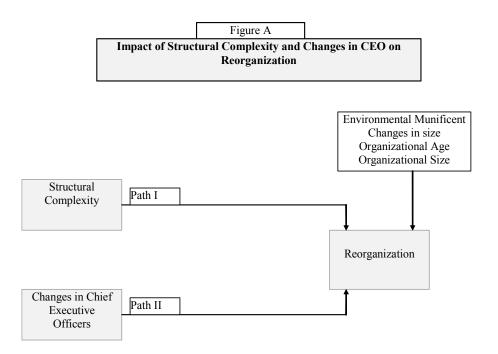
the partition barriers are created between the domains of legitimate actions, as different sets of rules tend to evolve independently in separate domains (March & Olson, 1989) which tend to limit change. Other studies have viewed organizational inertia to be rooted in structural complexity (Tushman & Romanelli, 1985). In this view, greater specialization and structural independence tend to promote greater use of formalized procedures to remedy problems in communication and coordination among activities. The byproduct, however, is more stability and rigidity, since organizations may find it problematic to overrule established control and coordination mechanisms to reorganize. Organizational learning theory also extends a compelling explanation about development of stability in organizations with complex structures (Levitt & March, 1988). The specialization and structural decentralization encourages divisions to develop competencies and accrue experience with technologies and routines. Over time the competence trap occurs as established prior experiences discourage organizations to reorganize and change direction. Hannan and Freeman (1984) argued that high degrees of complexity and structural coupling may greatly slow the required adjustments and change. Moreover drastic reorganization may consolidate greater political opposition by various groups within organization. Similarly, March and Olson (1989) argued that within complex institutions reorganization tends to be a difficult task to accomplish. Resistance by divisional and departmental administrators may inhibit reorganization.

There is also considerable theoretical support for the idea that high structural complexity has the opposite effect. A number of scholars have shown a direct relationship between structural complexity and change. Hage and Aiken (1970) showed that the greater the complexity the higher the rates of change in rendering new services and programs. Increases in the programs and services also require greater coordination of programs and activities. High levels of complexity also tend to stimulate change through structural decentralization and departmentalization of various specialists. Such structural arrangements tend to influence the coordinative mechanisms and necessitate greater administrative efforts (Blau, 1970). Chandler (1962) made a similar argument. In his inductive study, Chandler indicated that administrative reorganization became necessary as organizations diversified into new fields and selected administratively more bureaucratic M-form over U-form structures. Reallocation of administrative duties within M-forms allowed top executives to focus on strategic decisions and future investments (Williamson, 1985).

Similarly, Blau and Schoenherr (1971) argued that structural complexity resulted from proliferation of divisions requires greater portion of top administrative time in communication and coordination of activities. Administrative reorganization reallocates top administrative duties and facilitates a more efficient coordinative mechanism. In this view, structural complexity tends to result in polities built around the principles of division of labor and specialization and partitioning the experts and officials into self-contained separate domains (e.g., March & Olson, 1989). As such, high levels of complexity make integration more problematic (Lawrence & Lorsch, 1967) and increase the internal requirements for coordination among departments which necessitate high rates of reorganization. Moreover, specialization of personnel within complex organizations tends to

increase access to cutting-edge knowledge base that impel and facilitate change (Haveman, 1993). Parallel to the rational arguments on the relationship between complexity and change is the political argument that organizational politics within highly complex organizations also tends to be an impetus for reorganization. According to Pfeffer (1981) well endowed organizations tend to adopt greater structural differentiation by giving legitimacy to various groups or subunits and allocating resources to support the activities of such units within their unique domains. The legitimization of various subunits and groups within them and separation of functions necessitates a coordinative mechanism, and requires reorganization within administrative structure.

H2: There is a positive association between structural complexity and administrative reorganization.



# **METHODOLOGY**

# Sample and Data

Two sources of data were used in this study. All data were collected from published sources. The first data set was collected on the four-year universities. The source of the data set was the Yearbook of Higher Education (YHE), Marquis Academic Media, editions 1-10. The time period over which these data were collected included 1969 to 1979 academic years. A random sample of

202 organizations was selected. The National Directory of Higher Education was considered first section which was used in the present study. The data reported in the first section included administrative apparatus (from deans to presidents), job titles and size of the enrollment. This reporting began to add the positions of department chairs beginning in 1973. Structural differentiation was reported as the number of departments.

#### MEASUREMENT OF VARIABLES

# **Dependent Variable**

## Administrative Reorganization.

Administrative reorganization, the dependent variable in the present study, was considered as the readjustments of administrative duties. Administrative duties can be expanded or reduced marginally in an evolutionary fashion, the focus of this study, however, was on the drastic task reassignments which require reallocation of tasks, and addition and deletion of positions. A reorganization, not just marginal readjustments of duties, was considered legitimized when, 1) new reassigned tasks necessitated addition of new positions, 2) position deletion required other administrators to take on new positions, and 3) changes in the titles constituted major reallocation of duties. Two independent surveys of presidents of four-year colleges showed that university presidents felt that title changes did constitute reorganization in their universities. The operational indicator of reorganization consisted of: 1) the number of annual changes in the administrative titles, discounting any additions and deletions of positions, and 2) the absolute value of number of administrative positions (additions and deletions). Title changes also reflected a major reallocation of duties. The present study focused on high level of academic administration, within the sampled data academic administration includes presidents, chancellors, vice chancellors, vice presidents, academic deans and directors, and division heads for instruction, academic affairs, student personnel, libraries, admissions, business and finance, registration, special programs, adult and continuing education, and research.

# **Independent Variables**

# Structural Complexity.

Following Blau and his associates (Blau, 1973; Blau & Schoenherr, 1971) this study considered structural differentiation (complexity) to be the number of academic departments. The measure of the complexity was the cumulative average of number of departments for the years 1974

and 1975 (1974 + 1975/2). Given some fluctuation in number of departments over ten-year period the cumulative average of this variable provided a good assessment of the levels of complexity.

#### **CEO** Changes.

In the present study changes in the CEO were measured as the average cumulative in the top executive (president) changes beginning 1974 to 1978 (president changes have been measured as the average of (1971+1972+1973/3). Given the number of presidential changes over three year period prior to reorganization, the cumulative average indicated a good assessment of changes in the presidents over the measurement periods (1971-1973).

#### **Control Variables**

Some variance in rates of reorganization may be explained by variables other than structural complexity, and changes in the CEO. This study controlled for four of these.

#### Organizational Size.

In the sample of universities and colleges size has been operationalized as the number of full-time equivalent students. Student enrollment is an important resource base for academic institutions (Cameron, Kim & Whetten, 1987). Based on the author's interview with administrators within academic institutions levels of enrollment tend to influence the administrators' decision-making processes. Size in the present study was operationalized as the cumulative average of the number of full-time equivalent students for the years 1974 and 1975 (1974 + 1975/2). Considering the marginal fluctuations in the enrollments, the mean of these five years indicate a good assessment of the organizational size.

#### Changes in organizational size.

Changes in organizational size lead to increased pressures for reorganization of administrative framework. Changes in size in the present research were operationalized as proportional change in the number of full-time equivalent between years 1970 and 1975.

#### **Environmental munificence.**

Environmental munificence is the availability of resources in the environment to support growth strategies (McArthur & Nystrom, 1991). Following the study by Baker and Cullen (1993) the population age of 18-24 were considered as the college age individuals and the measure of

available resources in the environment. The proportional change in the number of college age individuals within the organizations' states seem to be the relevant indicator of changes in the environmental conditions and also indicative of the demand for services offered by the institutions within this sample.

#### Organizational Age.

Organizational age has been argued to have both positive and negative association with change. A number of researchers have argued that as institutions get older the increase in he levels of activities and the learning processes enhances the organizations' capabilities to adapt to changing conditions (Singh, Tucker & House, 1986). The life cycle theorists, however, have argued that younger organizations tend to have a more plastic structure than organizations at latter part their existence. In this research age of the organizations were measured as 1969 (beginning of study) minus founding year.

#### **Procedures and Design**

The path diagrams in the model (Figure 1) centers attention on three fundamental relationships. The main effects are changes in the CEO predicting rates of reorganization. Second, the main effect of structural complexity predicting rates of administrative reorganization. The model in this paper also controls for the effects of environmental munificence, organizational age, changes in organizational size, and organizational size on rates of reorganization.

#### **Measurement Period.**

The design of the study was based on the ten year data set. To measure the effects of independent variables on the reorganization (dependent variable) I divided the data into two measurement periods. In order to have a design that maximizes the information on reorganization (the dependent variable), the independent variables were measured prior to the reorganization. Changes in the CEO were measured as the average CEO changes between 1971 to 1973. Structural complexity was measured at mid-point of data set as the average structural complexity on year 1974 and 1975. Reorganization was measured as the cumulative reorganizations between 1974 to 1978. There were two years of overlap between measure of structural complexity and reorganization, allowing the measurement of contemporaneous effects. The cumulative measures of reorganizations, therefore, were associated with structural complexity and changes in CEOs.

#### ANALYSIS AND RESULTS

#### **Data Characteristics**

Means, standard deviations and intercorrelations among control variables and main effects are presented in Table 1.

Table 1:	Table 1: Descriptive Statistics and Correlations <sup>a</sup>										
Variables	Means	S.D.	1	2	3	4	5	6			
1. Reorganization	10.43	8.96									
2. Changes in Size	1.07	.69	.02								
3. Organization Age	57.44	47.52	.03	20							
4. Environment Munificent	1.26	2.88	.03	01	04						
5. Organization Size <sup>b</sup>	3.71	.64	.48*	.15	.01	.10					
6. Structural Complexity	13.75	11.21	.43*	.03	.04	.10	.64**				
7. CEO Change	.14	.16	.14*	12	03	02	.03	03			

 $<sup>^{</sup>a}$  N= 144-200.

#### **REGRESSION ANALYSIS**

Hierarchical regression was employed to test the impact of control variables and main effects on reorganization. The regression model (after all variables were entered in the equation) explained 30 percent of the variance in the dependent variable, reorganization, as noted in Table 2.

In the first step, regressing reorganization onto control variables, changes in size, environmental munificence, organizational size, and organizational age yielded significant results [F(4, 166) = 10.91, p < .001]. This set of variables produced 20 percent of the variance in the dependent variable reorganization. Given the significance of set of control variables the effects of individual variables were examined. Changes in the organizational size (growth and decline) did not yield significant results (p < .9). Similarly, environmental munificence did not yield any significant results (p < .5). Findings showed that organizational age as a main effect does not have a significant influence on reorganization (p < .7). Results did yield significant effect for the organizational size on the rates of reorganization (p < .001). Structural complexity and changes in the CEO were entered into the equation next. This set of variables explained and additional 10 percent of the variance in reorganization [F(6, 138) = 9.02, p < .001] as illustrated in step 2 of Table

<sup>\*\*</sup> p < .01

<sup>\*</sup> p < .05

<sup>&</sup>lt;sup>b</sup> Logarithmic transformations were used.

2. Given the significance of this set, the main effects of changes in CEO and structural complexity were examined.

Table 2: Results of Hierarchic	al Regression of Adr Size, Changes in CEO	,	•	tural Complexity,
Variables	Mode	el I	Мос	del II
	В		]	В
Changes in Size	.67	(2.13)	13	(2.23)
Organizational Age	.01	(.16)	.01	(.01)
Environmental Munificence	.06	(.15)	.09	(.17)
Organizational size	6 .67 <sup>Ψ</sup>	(1.02)	5.19 <sup>ψ</sup>	(1.45)
Structural complexity			.17**	(.07)
CEO Changes			8.34*	(4.15)
Constant	-14.55 <sup>ψ</sup>	(1.79)	13.30**	(2.35)
$\mathbb{R}^2$	.20 <sup>y</sup>	.30 <sup>y</sup>		
$\Delta R^2$	.20Ψ	.10 <sup>y</sup>		

Unstandardized regression coefficients are shown, with standard errors in the parentheses.

Regressing reorganization onto changes in CEO yielded a significant result. This finding was consistent with hypothesis 1. [B = 8.34, p < .04]. The regression analysis also yielded significant result on the relationship between structural complexity and reorganization [B = .17, p < .01]. This result supported hypothesis 2.

#### DISCUSSION

Findings indicated control variables, with the exception for organizational size, did not yield significant influence on reorganization. Even though organizations respond to environmental conditions and take advantage of the resources availability in munificence environments (e.g., McArthur & Nystrom, 1991), findings in this research did not support reorganization in response to conditions in macro environments. As main effect, changes in organizational size did not have a significant impact on reorganization. Similarly, organizational age did not yield a significant influence independently on administrative reorganization. Other research studies have found that changes in size in combination with other contextual variables such as age influence reorganizations.

p < .001

<sup>\*</sup> p < .04

<sup>\*\*</sup> p < .01

Young growing organizations trend to have higher requirement for reorganization than old growing organizations (e.g., Baker & Cullen, 1993).

In line with related research by Baker and Cullen, 1993; Blau (1970), and Child (1972b), the results of this study showed a significant link between size and administrative reorganization. Large universities reorganized their administrative framework, in part, due to higher levels of complexity and necessities for managing coordination and control among subunits. The results on size-reorganization relationship were inconsistent with ecological theorists (e.g., Hannan & Freeman, 1989). The pressures for structural inertia were overcome by large size and increased complexity. Such a dynamic capability to reorganize may have been facilitated by availability of the valued resources and capabilities of managers to reallocate resources from existing programs to new activities, such as, training top administrators on organizational-specific skills (e.g., Baker & Cullen, 1993) and enable them to adapt organizational structure to changing conditions.

Structural complexity as indicated by the findings did have a significant influence on administrative reorganization. High levels of complexity required greater administrative efforts in integration and coordination and stimulated reorganization in administrative structure. Within the sample of academic institutions the complexity created by greater numbers of departments and programs strongly influenced institutions to reorganize administratively through reallocation of administrative duties in order to coordinate among departmental units. Highly complex institutions restructured through various stages of development and gained knowledge to reorganize more frequently in response to internal cues (e.g., Baker & Cullen, 1993; Ford, 1980a). Results on the effects of structural complexity on reorganization were not consistent with more accepted view that complexity creates greater inertia.

The findings revealed that changes in the CEO have a significant influence on the administrative reorganization. New chief executives did have a major influence on administrative reorganization, primarily due, to necessity of establishing an administrative framework that may be more in favor of new CEO's goals and objectives. Moreover, changing the administrative framework may have allowed the new CEO to alter the existing practices and routine in favor of new programs. These results were congruent with studies by (Romanelli & Tushman, 1994; and Gabarro, 1987) which indicated that CEO succession followed by changes in the composition of the executive team and power distribution within organizations. Considering the insignificant effects of environment on reorganization, it is noteworthy to indicate that top administrators reorganize largely in response to internal pressures than external environmental conditions.

#### **FUTURE RESEARCH**

Our data suggest that organizational size, structural complexity and changes in CEO are major forces for administrative reorganization. The forces for change and stability in organizations tend to be rooted in institutionalized practices in larger more complex organizations. This research

possesses important implications for future studies on reorganization. The present research has purposefully a narrow focus on the influence of size, complexity and changes in the CEOs on administrative reorganization. The future inquiry is certainly warranted to understand the interactive effects of size and complexity. The interactive changes in CEO and organizational size, changes in CEO and structural complexity, and interactive effects of changes in CEO and changes in organizational size on administrative reorganization constitute particularly promising factors for future investigation.

Findings in the present research have important implications for top echelon and strategic decision makers. Results show that managers reorganized based on available information and cues form internal environment (Nisbett & Ross, 1980). The top managers in this study may have responded to the immediate environments in making decisions. The complexity of the structure created immediate problems for coordination and control and this may have taken the attention of the managers rather than external environmental factors.

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# THE REVERSE TAKEOVER: IMPLICATIONS FOR STRATEGY

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#### **ABSTRACT**

A reverse takeover is an acquisition of a publicly traded firm by a private business in order to sell shares and raise capital. Eighty three cases of reverse turnovers were examined. While the reverse takeover was primarily a strategy to secure capital it was also a strategy by which businesses could re-brand and a strategy to gain entry to foreign markets. For investors of failed businesses the reverse takeover is an exit strategy.

#### INTRODUCTION

Do you remember ValuJet? After a horrific crash in the Everglades which killed 105 passengers this low cost air carrier reinvented itself as the successful AirTran Airlines. The Mississippi Long Distance Discount Service (LDDS), a regional low cost telephone service, became Worldcom. Fredericks of Hollywood, the bawdy women's undergarment firm, is transforming into an innovative worldwide brand. The mechanism for each of these transformations was the reverse takeover (RTO).

The reverse takeover, also referred to as "reverse mergers," is a relatively new topic of growing interest to academics. Academic research is scant because RTOs involve a relatively small number of firms; the RTO is principally viewed as a financial move of importance to venture capitalists; and, it is typically seen only as an entry strategy to secure investment capital for small firms. RTOs have been used by large, global firms found in most stock markets. The reverse takeover is also becoming an instrument for firms to cross national borders. Recently, GLG Partners, one the largest global investment firms, relocated from the U.K. to the U.S. using this entry strategy. Other foreign firms are doing the same, including firms from developing and emergent nations.

This exploratory paper examines 83 RTOs from 1994 to 2008 of which 19 were initiated by U.S. firms and 74 were initiated by firms outside the U.S. The objectives are to explore a little researched area of strategy in mergers and acquisitions and to establish that reverse mergers have strategic implications beyond financial moves to access investment capital for the small firm.

Mergers are a combining of two businesses into a single entity. Acquisition is the purchase of a business by another business entity. Together mergers and acquisitions (M&As) are means for corporate growth or diversification strategies. The prevailing perspective is that M&As should be driven by "fit", complementary or additive to the acquiring firm's core capabilities (Porter, 1987;

Collins & Montgomery, 1995). Growth acquisition strategies are driven by market, product, and technology considerations. Illustrative of market expansion, Wachovia's 2006 acquisition of Golden West Financial Corporation expanded the East Coast bank into the western state's markets. P&G's acquisition of Gillette expanded its already highly diversified product line. In 2005 News Corporation purchased Myspace, acquiring a new technological platform for music publishing and a vehicle for building a new media blending mobile and internet reception of news from new and old sources. In these successful examples M&As are a strategy of wealth building through the creation of "synergy." Firms are targeted for acquisition because they enhance the capabilities of existing resources. The M&A objective is that a combination of two firms creates value that exceeds the value of each firm operating individually.

Unlike the typical M&A the primary driver of a reverse takeover is the conversion of private assets to public ownership. The acquiring firm is a business pursuing investment. Investment capital is derived from the selling of stock over-the-counter or on a major stock exchange. To access these investment markets a private firm pursues a reverse takeover of a targeted public firm which is listed on an exchange or sells its stocks over-the-counter. In addition to access to investment, this study shows that choice of the targeted firm for acquisition also may afford strategic advantage to the acquiring firm: change in image or cross-border market entry. Moreover, the reverse takeover provides an exit strategy for failed firms.

#### "GOING PUBLIC": THE IPO

The transformation of a private firm to a public company is usually through the Initial Public Offering (IPO). To grow a business requires capital. If a business can generate sufficient income from operations it need not "go public." Entrepreneurial start-up firms typically require financing to expand or to build capabilities. They obtain this financing by "going public." The Initial Public Offering (IPO) sells ownership of the business in the form of shares. This is an expensive and time consuming process, however. Costs for lawyers, brokers, fees, and accountants to do an IPO are estimated to be about 7% of the total value that is raised. Therefore, a \$50 million IPO (the minimum capitalization for a firm listed by NASDAQ and the New York Stock Exchange) costs \$4.5 million. The average processing time is 16-19 weeks (Davis, 2000). Because the IPO requires close scrutiny by outside parties, including the Securities Exchange Commission, the firm will have demonstrated sustainability through it operations and financial performance. The average firm in the 1990's had ten years of business experience before it sought an IPO (Clark, 2002).

#### REVERSE TAKEOVERS

Reverse takeovers (RTOs), sometimes referred to as "reverse mergers," are acquisitions in which a private firm acquires a public firm with the intent of using the target's access to capital

markets (its stock listing) to secure investment capital (Singha, Gonzales, & Aase, 2005; Gleason, Rosenthal & Wiggins, 2005; Mills, 2003). For a small firm seeking public investment the RTO can offer time and cost advantages. It can be completed within 60 days. The legal and brokerage costs have been estimated between \$50,000-\$400,000 (Sweeney, 2005; Mills, 2003). The total RTO costs depend on the agreed percentage of stocks retained by the original shareholders in the post-merger company

The "speed to market" opportunity afforded by the reverse takeover alternative to the IPO in the late 1990's was seized by entrepreneurial start-ups (Gleason, Rosenthal & Wiggins, 2005, p. 57). New Internet companies actively sought shell companies to take advantage of the investment craze. This was not singularly an American occurrence. In Canada one broker in small firm stocks identified 117 Internet RTOs. For example, Gleneagles Petroleum became Clickhouse.com Online, Inc.; Sikaman Gold resources transformed into NorstarMall; and, Latingold, Inc. was acquired by Travelbyus.com (Chidley, 1999).

Because the targeted firms often are small, financially stressed, public companies, the acquiring firm is not pursing synergy. The acquisition is typically asymmetrical in that the targeted entity is a "shell" intended to be a vehicle for capital growth, rather than the usual acquisition objectives. While the shares of the small firms that complete an RTO are often sold Over-the-Counter, the acquirer's goal is to grow to meet the \$50 million market valuation required to be listed on the NASDAQ or NYSE. The financial results have been mixed. Murat, Shekhar, and Torbey (2007) found significant improvement in returns attributable to these mergers. Singha, *et al.*(2005) and Gleason, *et al.*(2004) examined reverse mergers and reported that the majority failed to sustain their immediate post-merger stock prices and over a longer term were poor performers.

#### **SHELLS**

Twenty of the 83 firms examined employed identifiable shells in a reverse takeover. A shell company is a firm that is publicly listed but not actively traded. These are "pink sheet" firms because the company cannot meet Securities and Exchange Commission (SEC) listing requirements, such as audited financials. The typical case is a business that is in serious financial difficulties and even may not be operating.

Shells are found in global stock markets. The Canadian Venture Exchange (CSNX) and London's Alternative Investment Market (AIM) historically had reputations for harboring shells that served as unscrupulous stock schemes until they were cleaned up in the early 2000's. The practice of "pump and dump" was common. In this scheme a shell was acquired in a RTO, the merger was promoted as a potentially high growth, and as the share price escalated the original investors unloaded their shares to unsuspecting buyers. This practice largely has been eliminated by close regulation (Mandel, 2001).

A mistrust of shells has given rise to a unique type of shell firm, the SPAC (Special Purpose Acquisition Company) also referred to as a "blank check" firm or Capital Pool Company. This investment shell is a business entity formed exclusively with the intent of providing a vehicle for a private firm to become listed without an IPO (Dumon, 2008). A shell firm is created and shares are sold through an IPO. The SPAC's charter may indicate to investors a general kind of business that the shell would target for a reverse takeover. The SPAC is a firm in search of a business. Its core capability is the ability to provide investment capital faster than the IPO. Unlike a holding company acquisition, the SPAC can allow the operating business to retain most of the ownership while accessing the pooled investment funds (Britnell, 2004). *Fortune* reported that the use of the SPAC is increasing with 40 such RTOs in 2007 compared with 13 in 2004. (Kapner, 2007).

Hughes Telematics Inc. is representative of a SPAC merger. The company makes consumer controlled computerized information systems for cars. Computerized in-car navigation, diagnostics, security, and other information systems have potential for a growth market. The firm was taken public through a SPAC named Polaris Acquisition Corporation in 2008 issuing \$700 million in stock (Morris, 2008). Polaris Acquisition was a blank check company organized on June 18, 2007.

Because shells are undistinguished, even failed, companies once the merger is completed the name of the shell company can be changed. Among the 83 RTOs studied, I identified 28 that changed the name of the shell to the name of the acquirer or some variant of the acquirer's name. This likely reflected a desire to maintain the firm's reputation or brand identity. It also reflected the need that the firm's name conveys the nature of the new business. For example, Towerstream, a provider of high speed wireless, went public in 2007 by reverse acquisition of Universal Girls Calendar and quickly changed the name to Towerstream Corporation.

#### IMPLICATIONS FOR STRATEGY

The reverse takeover has gained visibility as a venture capital strategy. This exploratory examination of 83 RTOs shows that there are strategic implications beyond financing. Access to capital alone was not always the primary driver for acquiring firms. In a few instances acquisition of shells and other targets allowed a business to reinvent itself with a new identity. For a growing number of foreign firms the RTO provided a unique entry strategy into a foreign market while obtaining citizenship. I term these the "make-over" and "immigrant" strategies.

#### Reverse Takeovers as "Makeovers"

The RTO provides an opportunity to the acquiring firm to change its name and re-invent itself. Two cases clearly exemplify the capability to re-brand the firm or to signal to rivals and customers a strengthening of the company's brand.

In 1995 ValuJet, a regional air carrier, suffered a highly publicized crash during take-off. In 1996 in Washington, DC, a second ValuJet crash resulted in the death of 110 passengers. The FCC grounded the carrier. Attempts by ValuJet to reestablish operations were thwarted by litigation, financial trouble, and tattered public image. In 1997 ValuJet acquired Airways Corporation, Inc., the holding company for AirTran Airways, Inc. of Orlando, Florida. After this reverse takeover the firm's name was changed to AirTran Holdings, Inc. ValuJet re-invented itself as the successful low cost carrier AirTran.

When the French business giant Vivendi decided to increase its share of a growing market for video games, it spun-off its Vivendi Games division, including the American Blizzard Entertainment, through an RTO of the U.S. firm Activision, creator of the popular "Guitar Hero." Vivendi's major success has been its "World of Warcraft," an on-line subscription game. Despite its global reach and several acquisitions Vivendi failed to build a strong presence in the PC and platform-based games. In 2007 Activision became the number one publisher of video games in the United States. After acquiring Activision, Vivendi morphed into an American video games giant. The new corporate identity was changed to Activision Blizzard in 2008 to leverage the reputation of both brands. This RTO is expected to create synergy. The French parent Vivendi gained access to NASDAQ to value what it feels is an undervalued business. Activision expects that Vivendi will enable its products to access global markets. Both firms have seen this takeover as a way to compete with the industry's biggest rival, Electronic Arts (Richtel & Pfanner, 2007).

#### Reverse Takeovers as "Immigrants"

The RTO can be used as a cross-border entry strategy. A business in one country acquires the identity of a public company in another country. Twenty of the 83 researched firms acquired foreign businesses or shells. Ten of the RTOs studied were foreign firms entering the U.S. market to become a listed American firm. Four foreign firms entered Canada through RTOs. The reverse takeover provides the foreign firm with wider investment opportunities and consideration as an American business. In 2007 nearly 200 foreign firms became American firms through the RTO of which about 25% were Chinese firms (Harrison, 2008).

Immigration is not simply the strategy of a foreign new venture seeking American capital. GLG Partners is one of the leading hedge funds in Europe. In 2007 GLG currently managed more than \$24 billion in assets. The British asset manager became a US firm when it acquired Freedom Acquisition Holdings, Inc. Freedom Acquisitions incorporated as a "blank check" entity in 2006, a "shell." GLG cited reasons for its RTO as the objectives of building a global business, access to wider capital markets and personnel talent (PRNewswire, 2007).

Five of the reverse mergers investigated were Chinese firms entering the U.S. market. *Business Week* (2007) reported that prior to 2005, 150 Chinese companies entered U.S. capital markets through RTOs. The RTO not only provided quick entry to the U.S., but owners of shell

companies were accommodating to exit or minimize their involvement and to allow Chinese management of the company to continue.

An example of this immigration strategy is NASDAQ listed China BAK, Inc. BAK is a global business manufacturing lithium-based battery cells based in China. The firm went public in 2002 with the acquisition of Medina Coffee Company, Inc. Medina Coffee located in Bellevue, Washington intended to build a specialty coffee and espresso cart business but failed to realize either the level of investment from Over-the-Counter sales of it stocks or the sufficient profit to finance growth. In 2005 the name "Medina Coffee" was changed to China BAK to correctly identify the product brand. Another battery company Hong Kong Highpower Technology followed with a U.S. RTO in 2008. In the 83 the companies studied Chinese RTOs included agricultural products, technology, public relations, ports and other asset management businesses.

As in many M&As combining firms can be problematic. The issues in a foreign RTO of an American firm are exacerbated by cultural differences between managers and owners, especially when the acquiring firm originates from a country that has little or no experience with stock markets. The objectives of the foreign firm in an RTO are to "go public" and access global investments as a resident firm of a country with an attractive stock market. The expectations of businesses operating in traditional economies will be to grow by building sales over the long run. This longer-term, risk adverse culture runs counter to expectations of American investors who tend to focus on stock valuation and short-term, quarterly gains. The American investor perspective favors foreign firms that possess either immediate growth potential or perceived technological advantage (Armato, 2008). The currently declining state of American markets limits immediate growth potential and may favor the longer-term perspective of immigrating firms. Of the 10 foreign firms in the sample that moved to the U.S., five were Chinese and were technology or food related businesses. Five immigrants were European.

Since 2004 the Securities and Exchange Commission has employed greater scrutiny when evaluating foreign reverse mergers. There are also political limits to foreign control of U.S. firms through RTO. In 2005 the Chinese National Offshore Oil Corporation attempted acquisition of Union Oil Company of California (Unocal) and was thwarted when Congress intervened. The President subsequently persuaded the Chinese to withdraw as a matter of U.S. national security (Moore, 2006).

#### **Reverse Takeovers as Exit Strategy**

The use of shells can be risky for acquiring firms, but afford an exit strategy for targeted firms. There are venture capital consultants that promote their ability to identify appropriate shells to businesses considering the RTO for going public. The shell firms targeted in RTOs are failed business ventures in which investors hold low value or worthless shares. The purchase of the failed business provides a means to recover some of the investors' losses. Shareholders of the shell usually

negotiate five to forty percent holdings in the post-merger company (Mills, 2003). Twenty one such shells were identified in this study.

For example, in the 1980's demand for popular culture products (Superman T-shirts, comic books, and board games) generated millions of dollars of sales for Classics International Entertainment Inc.(CIEI), an operator of 22 stores. The business went public to attract investment for its expansion. In the mid-1990's the comic book industry plunged from about one billion dollars in sales to \$200 million, and CIEI closed its operations. CIEI was listed as a "pink sheet" entity, an over-the-counter listing that does not require SEC auditing standards. Piranha, an entrepreneurial high-tech firm, developed a new data compression method and in 1999 sought investment to launch its business. A reverse merger of CIEI with Piranha in 1999 raised about \$10 million. This provided CIEI investors a partial recovery of their investment as the shell turned over to Piranha (Applegate, 2000). After going public with an RTO Piranha failed to develop a workable and marketable product. In 2004 the Securities and Exchange Commission filed a civil lawsuit alleging an accounting-fraud and market-manipulation scheme involving the stock of Piranha, Inc. The firm's stock has since been de-listed (SEC, 2004).

#### RTO OUTSIDE THE U.S.

Sixty four of the 83 reverse mergers studied were non-US firms – indicating the global appeal of the strategy. Twenty of these foreign firms targeted non-U.S. firms for take-over. Most RTOs outside the U.S. were acquisitions of same country businesses. The sample included three RTOs on the South African stock exchange (JSE), two RTOs listed on India's Bombay Stock Exchange (BSE), two on Hong Kong's exchange, and at least one on other national exchanges.

The majority (31) were acquisitions of U.K. firms by other U.K. firms, small privately held businesses acquiring small public firms to access London financial markets. Outside the U.S. reverse mergers include not only a firm acquiring another to secure a listing on the exchange, but also include asymmetrical acquisitions in which a smaller firm acquires a larger firm (*Guardian*, 2007). The London's Alternative Investment Market (AIM), often referred to as the "London Stock Exchange's junior market," has attempted to curtail the use of shell companies for reverse mergers. This has encouraged shells to relocate to other British exchanges (*Reverse Merger Report*, 2006). U.K. reverse takeovers can be large and trans-national. Benckiser NV, the Dutch manufacturer of brands such as Calgon, Finish, Electrasol, Jet Dry, Vanish, and Lime-A-Way, in 1990 acquired the British firm Reckitt & Coleman, including brands Lysol, Airwick, Brasso and Easy Off. The merged Reckitt Benckiser PLC resulted in one of the world's leading manufacturers of household cleaning products now traded on London's FTSE.

Five Canadian RTOs were studied. The Canadian stock exchange (TSX) is the global leader for listing mining and oil and gas companies. In this study, reverse takeovers were dominated by mining companies, including foreign acquisitions of Canadian firms. African platinum mining

company Pelawan became the first black owned business operating under South Africa's Black Economic Empowerment legislation to trade on a North American market when it acquired the Canadian mining firm Anooraq. Two mining firms held by American investors acquired Canadian companies to secure capital on the Toronto exchange for pending African mineral projects.

#### RESEARCH DATA

There is no authoritative listing of RTOs, and non-U.S. RTOs can be especially difficult to identify. The 83 firms examined were identified as reverse takeovers by search within EBSCOhost, an on-line, multidisciplinary index for journals and periodicals. The earliest RTO took place in 1994, but the search yielded RTOs in the period 2000 to 2008:

				Table 1: 1	List of RTOs				
REC #	Date	Firm	Nationality	Industry	Target	Shell	Nationality	Industry	New Entity, if Named Changed
1	2008	MTH Group Ltd	So Africa	Mobile Phone	Reliance Communi- cations Ltd		India	Mobile Phone	
2	2008	Vivendi Games	France	Video Games	Activision		US	Video Games	Activision Blizzard
3	2008	Conchango	UK	Digital Media	Harrier Group	1	UK		
4	2007	ROK Entertainment Group-UK	UK	Lending	Cyberfund-US		US		
5	2007	Westbury Propert Fund-UK	UK	Trucking	Eddie Strobart-UK		UK	Logistics/rai l/raft	Stobart Group Ltd
6	2006	IndoAgri	Singapore	Palm Oil	CittyAxis Holdings Ltd		Singapore		Indofood Agri Resources Ltd
7	2006	Geovic Ltd	US	Mining	Resource Equity Ltd		Canada	Mining	Geovic Mining Corp.
8	2007	Pan African Resources	So Africa	gold explor/dev	Barberton Mines (Metorex, parent)		UK		
9	2007	Tele-Passport	So Africa	Internet	Cenmag Holdings Ltd		So Africa	Ind. Manu- facturing	

				Table 1:	List of RTOs				
REC #	Date	Firm	Nationality	Industry	Target	Shell	Nationality	Industry	New Entity, if Named Changed
10	2007	Amercian Basketball Association (1996)	US	Sports	ABA, Inc. (shell)	1	US		
11	2007	Individual Restaurant Group	UK	Restaurants	Conran Restaurants		UK	Restaurants	
12	2006	Mvelaphanda Resources	UK	Mining	Afripalm		UK	Mining	
13	2006	Riverdeep	Ireland	Publishing	Houghton Mifflin	1	US	Publishing	
14	2006	Nycomed	Norway	Pharma- ceuticals	Altana		German	Pharma- ceuticals	Nycomed
15	2006	Digital Marketing Group	UK	Marketing	Seashell II		UK	Investment fund	Digital Marketing Group
16	2006	Upstream Asia	HongKong	PR	Raven Capital, Inc		UK	Investment bank	Upstream Marketing & Communi- cations, Inc
17	2006	Croda International PLC	UK	Chemicals	Uniquema (ICI)		UK	Chemicals	
18	2006	Amherstburg	Canada	Phone Cards	Ribbon Capital Corp	1	Canada		Selectcor
19	2006	Twenty	UK	Iinvestments	Dataforce		UK		Twenty
20	2006	Impiric	UK	Advertising	HPT Response		UK	Advertising	Harrison Troughton Wunder- man
21	2006	Hill Station	UK	Ice Cream	Losely Dairy & Granelli McDermott		UK	Ice Cream	
22	2005	Nanoscience Corp	UK	Technology	Toumaz Technology		UK	Chip Manu- facturer	
23	2005	Triton Mining Corp	Canada	Mining	Polaris	1	Canada		Polaris Geo- thermal Inc

				Table 1: I	List of RTOs				
REC #	Date	Firm	Nationality	Industry	Target	Shell	Nationality	Industry	New Entity, if Named Changed
24	2005	Gas Natural SA	Spain	Utility/Gas	Endesa		Spain	Gas/Utility	
25	2005	Verimark Holdings	So Africa	Retailing	Creditvision		So Africa	Financial Services	Verimark
26	2005	Tower plc	UK	Holding Company	Maskina AS		Norway	VOIP software	Vyke Communi- cations
27	2005	London Digital Printing	UK	Marketing	Documedia		UK	Digital Printing	Trigent
28	2000	Ingenta	UK	Techical Information	Delyn Group		UK		
29	2005	KBC	Belgian	Banking/ Finance	Almanij NV		Belgian	Banking	KBC Group NV
30	2004	Rensburg	UK	Stockbroker	Crosthwaite		UK	Stockbroker	Investec
31	2004	Aukett Grooup PLC	UK	Construction	Fitzroy Robinson Ltd		UK	Construct- ion	
32	2004	Youmedia	UK	Internet Media	Digital Interactive Television Group		UK	Internet Media	Youmedia
33	2004	Urban Dining	UK	Restraurants	Tootsie		UK	Burger Chain	
34	2003	Hotgroup	UK	Manpower Recruiting	Rexonline		UK	Internet Placement	
35	2004	Pelawan (black owned)	So Africa	Investment Consortim	Anooraq Resources		Canada	Platinum Mining	
36	2004	Asset Plus Securities	Thailand	Broker	ABM Amro Securities		Thailand	Broker	Asia Plus Securities
37	2004	ISIS Asset Management	UK	Asset Manager	F&C Asset Management		UK		F&C
38	2004	PCCW	Hong Kong	Investment/ Telecom	Dong Fang Gas		Hong Kong	Telecom- munications	
39	2004	Guinea Aluminum Products Corp	British VI	Mining	PL Internet Inc.		Canada	Mining	Global Alumina Corp
40	2004	IAMGOLD	Canada	Mining	Weaton River Minerals		Canada	Mining	
41	1997	Swiss Bank Corp	Swiss	Banking/ Finance	USB		Swiss	Banking	USB AG

				Table 1: 1	List of RTOs				
REC #	Date	Firm	Nationality	Industry	Target	Shell	Nationality	Industry	New Entity, if Named Changed
42	2004	Hutchison Whampoa	Hong Kong	Ports/ Property	Vanda		Hong Kong	Telecom- munications	Hutchison Whampoa Limited
43	2003	Telezygology	Australia	Intelligent fastening technology	CED Austrialasia	1	Australia		
44	2003	TripleArc	UK	Software	Access Plus		UK	Printing	
45	2008	Castle Technologies, Inc.,	US	Online Gaming	ImagiTrend, Inc.		US	Pet Cemeteries	Castle Techno- logies, Inc.,
46	2003	Interactivity	UK	Shell	L&P MCC	1	UK	Healthcare	Heathcare Enterprise Group
47	2002	Zipcom	UK	Internet	Transigent		UK	Internet	Zipcom
48	2002	XS Leisure	UK	Bowling/ Pool	Top Ten Bingo		UK	Bingo	
49	2001	meanfiddler.com	UK	Music Online	Meanfiddler Holdings		UK	Music Venues	Mean Fiddler Music Group
50	2001	Xworks	UK	Investor	Chrome Technologies		UK	investments	
51	2000	Intercare Group PLC	UK		Mccarthy Group Ltd		UK	Pharmaceuti cals	
52	2000	eVestment Company PLC	UK	Online Broker	Christows Groups		UK	Financial Advice	
53	2000	Benckiser NV	Dutch	Cleaning Products	Reckitt & Coleman		UK	Household Products	Reckitt Beckiser plc
54	2000	Royal Bank of Scotland	UK	Banking/Fin ance	NATIONAL Westminister Bank plc		UK	Banking	
55	1999	NorstallMall.com	Canada	E-commerce	Sikamon Gold Resources Ltd	1	Canada	Mining	
56	1999	Metorex Corp	Canada	Mining	Consolidated Murchison		So Africa	Mining	

				Table 1:	List of RTOs				
REC #	Date	Firm	Nationality	Industry	Target	Shell	Nationality	Industry	New Entity, if Named Changed
57	1998	Kafus Environmental Industries	Canada	Waste Processing	Hyaton Co	1	Canada	Shell	Hyaton Organic Industries
58	1998	Burlington Group	UK	Investor	Sanctuary Music		UK	Recording/ Producer	
59	1997	Zurich Group	Swiss	Banking/Fin ance	Scudder Stevens and Clark		US	Fund Manager	Scudder Kemper Invest- ments Inc.
60	1994	Stacey's Buffet	US	Restaurants	Homestyle Bufffets		US	Restaurants	
61	1998	Halozyme	US	Pharmaceuti cals	Global Yacht Services	1	US	Yachts	Halozyme Thera- peutics Inc
62	2002	Viper Powersports Co	US	Motocycles	Echo Capital	1	US	Auto Leasing	Viper Power- sports Inc
63	1996	Meritage Homes Corp	US	Home Builder	Homeplex Mortgage		US	REIT	Meritage Homes Corp
64	2008	VGX Pharmaceutical	US	DNA Vaccines	Inovio Biomedical Corp		US	Biomedicals	VGX
65	2008	ChromaDex	US	Reference Standards	CDI Acquisitions Inc		US		
66	2008	Highpower Technology	China	NiMH batteries	WRASP*	1	US		
67	2008	Juhl Energy	US	Wind Farms	MH & SC		US	Driver Training	Juhl Wind, Inc
68	2008	Shanghai Medical Technologies	China	Dialysis Provider	Aamaxan Transport Group, Inc.		Canada	Trans- portation	
69	2007	Towerstream Corp.	US	High Speed Wireless	Universal Girls Calendar	1	US		
70	2008	Tianjin Yayi Industrial	China	Goat Milk	Ardmore Holding	1	US	Pinkslip/ Investor	

				Table 1: 1	List of RTOs				
REC #	Date	Firm	Nationality	Industry	Target	Shell	Nationality	Industry	New Entity, if Named Changed
71	2008	Subhiksha	India	Discount Grocer	Blue Green Construction & Invest		India	Holding Company	
72	2004	Emtec	US	IT Services	Westwood Computer Corp		US	E-seller of Printers	Emtec Federal
73	2006	Neurogenetics	US	Pharmaceuti cals	Axonyx		US	Biopharma- ceutical	Torrey- Pines Thera- peutics Inc
74	2004	China Agritech	China	Fertilizer	Basic Empire Corporation	1	US		China Agritech
75	2008	Frederick's of Hollywood	US	Women's Wear	Movie Star		US	Women's Sleepware	Frederick's of Hollywood Holding Group
76	1998	Miracom	US	Auto Parta e-tailer	IELS	1	US		Parts.com
77	1999	Piranha	US	Data Compression	CIEI	1	US	Comic Book Retailer	
78	2004	Cingular (private)	US	Telecom- munication	AT&T Wireless (listed)		US	Telecom- munication	AT&T Wireless
79	2007	GLG Partners	UK	Asset Manager	Freedom Acquisition	1	US		GLG Partners, Inc
80	2005	Valu Jet	US	Airlines	Airways Corp		US		AirTran
81	2006	BAK International	China	Batteries	Medina Coffee, Inc.	1	US		
82	2006	Dalian Chuming	China	Pork Processing	Energroup Holdings Corp	1	US		ENHD
83	2008	South Peak Interactive	US	Console games	Global Services Partners Acquisition Corp	1	US	SPAC	

#### DISCUSSION

This exploration of 83 reverse takeover cases found that this strategic move is not completely explained as a strategy restricted to small businesses seeking a quick and inexpensive alternative to an IPO. This study revealed that Reverse Takeover is used by large and small firms. While the RTO is an acquisition strategy of private firms, small and large, it should be viewed critically beyond the financial motives of small venture capitalization.

The reverse takeover is a business strategy that receives almost no attention within strategic management. It is a fairly recent, but growing, business activity. As this exploratory paper addresses, the RTO is also more than a strategy for small venture capitalization. The RTO is a strategy for firms seeking to reinvent or re-brand the business. As a foreign market entry strategy the RTO is a kind of reverse direct investment strategy where capital is developed in a foreign market to invest in an entrant firm. Foreign firms seem to target exchanges for entry as national exchanges specialize in types of industrial investors. For the targeted firm, the RTO is an exit strategy in which investors in failed businesses seek to recover value. Each of these issues merit additional study within the strategy literature.

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