ORGANIZATIONAL ENTREPRENEURSHIP
AND THE ORGANIZATIONAL PERFORMANCE LINKAGE
IN UNIVERSITY EXTENSION

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the
Graduate School of The Ohio State University

By

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* * * * *

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ABSTRACT

Entrepreneurial actions are viewed as critical pathways to improved performance in organizations of all types, sizes, and ages. Within the growing body of literature there is a need to investigate entrepreneurship in order to provide theoretical and practical applications for existing organizations. This study examined the relationship between Organizational Entrepreneurship and Organizational Performance within the Cooperative Extension System, a national educational network extending the research-based knowledge of land-grant colleges and universities. This study measured both Entrepreneurial Orientation, based on Covin and Slevin’s scale (1989), and Entrepreneurial Management, based on a scale developed by Brown, Davidsson, and Wiklund (2001) that operationalized Stevenson’s (1983) conceptualization of entrepreneurship as a set of opportunity-based management practices.

Extension Directors in the United States and territories were invited to respond to a questionnaire, reporting on Organizational Entrepreneurship and Organizational Performance based on both financial and non-financial indicators. Seventy percent of the Extension directors responded and results were aggregated by regional categories. Substantial Organizational Entrepreneurship was evident in Extension organizations in all four region. This study measured Organizational Performance based on a five year funding trend, as well as on non-financial indicators through a Performance Satisfaction
Results from multivariate data analysis indicated that risk taking and tenure accounted for the highest relative contribution to the dependent variable Performance Satisfaction. Strategic orientation and risk taking accounted for the highest relative contribution to the dependent variable, percent change in total funding.

As Extension organizations nationwide address more diverse audiences, an increasingly complex funding mix, and rapidly evolving technologies, the field of entrepreneurship offers principles to continuously improve performance. This study contributed to the field of entrepreneurship and to organizational development in university Extension.
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I thank my advisor, committee members, and professors for their professional support and personal encouragement throughout this endeavor. I extend a very special thank you to my classmates and colleagues for their camaraderie over the years.

I also extend my appreciation to my parents and other family members who taught me faith and perseverance; my teachers who encouraged my love of learning; and my friends who kept me smiling throughout my many years of higher education.
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CHAPTER 1

INTRODUCTION

1.1. Background and setting

Entrepreneurship has been studied by scholars in various disciplines including psychology (Hornady & Aboud, 1971; McClelland, 1961; Shaver & Scott, 1991); anthropology and sociology (Granovetter, 1973; Reynolds, 1991; Weber, 1947); economics (Cantillon, 1755/1931; Kirchhoff, 1991; Kirzner, 1973; Knight, 1921; Marshall, 1930/1961; Say, 1803/1971; Schumpeter, 1934); and management (Miller, 1983; Stevenson, 1983). Entrepreneurship research has progressively moved from the study of individual traits to the features of the entrepreneurial organization (Morris & Kuratko, 2002; Zahra, Kuratko, and Jennings, 1999). As the twenty-first century unfolds, entrepreneurial actions are viewed as critical pathways to competitive advantage and improved performance in organizations of all types, sizes, and ages (Brown, Davidsson, and Wiklund, 2001; Covin, Slevin, and Heeley, 2000; Kuratko, Ireland, and Hornsby, 2001). Evidence has suggested organizations that learn how to facilitate entrepreneurship in its various forms are more competitive and perform better than those that do not (Zahra & Covin, 1995). Some even believe that the lack of attention focused on implementing
entrepreneurial actions successfully in the fast-paced and complex economy will result in failure (Zahra, 1999).

With an increasingly diverse constituency, new technologies, and changes in traditional funding sources, the Cooperative Extension System (CES), like other established organizations, is exploring entrepreneurship theory and practice. The Cooperative Extension System (CES) was created by the Smith-Lever Act of 1914 as a cooperative relationship between federal, state, and county government for land-grant universities (LGUs) to link their research and education with local communities. All universities engage in research and teaching, but the nation’s land-grant colleges and universities have a third critical mission—outreach and engagement, in which the CES is a critical component.

Extension is a publicly funded system that links the educational and research resources and activities of the National Association of State Universities and Land-Grant Colleges (NASULGC), the U.S. Department of Agriculture (USDA) Cooperative State Research, Education, and Extension System (CSREES) and approximately 3,000 county administrative units. With LGUs in every state and territory, the CES mission is “to enable people to improve their lives and communities through learning partnerships that put knowledge to work” (NASULGC, 2001). There are various models of Extension management structure, including Extension as an integrated subunit of the university’s college of agriculture, Extension as a stand-alone academic unit headed by a dean on equal footing with other college deans, Extension as managed by a member of the university’s president cabinet, and emerging models based on integrated university
outreach, engagement, continuing education, and cooperative Extension. This study focused on the 54 Extension organizations at NASULGC-member land-grant institutions established through the Morrill Act of 1862.

Since 1914, when President Woodrow Wilson signed the Smith-Lever Act, CES has proven to be a successful model for federal, state, and local governments to work cooperatively with the national land-grant universities (Rasmussen, 1989). However, due to federal, state, and local funding trends, the CES is exploring a changing funding portfolio to finance more of their budgets from tuition, fees, grants, and contracts. The majority of CES organizations have developed revenue generation policies (Miller, 2004). Alternative funding sources for Extension have been explored since the 1980’s and by 1995, *Framing the Future*, a report prepared for the Extension Committee on Organization and Policy (ECOP) and the CSREES, included broadening resource acquisition as one of the five major issues for the System.

In 1997, the National Extension Personnel and Organizational Development Committee, an ECOP subcommittee, conducted a survey of faculty, staff, and administrative officers to take the “pulse of the system” concerning alternative revenue sources for Cooperative Extension and research. More than 90% of all respondents to the *Pulse* survey reported that there had been a shift in thinking about alternative funds in the past three years. When asked to indicate the reason for this, responses included decreasing state and federal funds; the need to meet match funding requirements; costs increasing at a rate faster than appropriated funding; desire to expand programming; increased program demand; increasing salary and benefit costs; changes in leadership; an
intensifying need to stay competitive, and administrative pressures from University administration. The Joint Task Force on Managing a Changing Portfolio defined alternative revenue as monies that were not appropriated directly to Cooperative Extension or research by federal, state and local governments. As the CES faces these challenging economic conditions, leaders throughout the System can learn from the emerging field of organizational entrepreneurship.

Schumpeter (1947) differentiated between two kinds of reaction to changing economic conditions, including the adaptive response which follows well-known paths and the creative response which opens up fundamentally new ways of economic and social development. The discovery and realization of creative responses are the characteristic functions of the entrepreneur. Change, largely driven by new technology and globalization, has created substantial uncertainty (Bettis & Hitt, 1995; Ireland & Hitt, 1999), which can be used as an advantage for those employing an entrepreneurial mindset focused on identifying and exploiting opportunities (MacGrath & MacMillan, 2000; Shane & Venkataraman, 2000; Zahra & Dess, 2001).

Entrepreneurial interest and initiatives are evident throughout all levels of Extension. For example, the Cooperative Extension Systems of the United States and territories, along with other components of Land-Grant Universities and the Cooperative States Research, Education and Extension System (CSREES) of USDA, are cooperating to build a national eXtension system to more efficiently serve current and new customers in ways that provide accurate and just in time information for decision making. Various state and local entrepreneurial Extension teams and programs have been featured in the
Journal of Extension. In October, 2004, the Cooperative Extension System sponsored a two-day event, *The Power of New Ideas: Impact Through Innovation*, hosted by NASULGC. While there are many examples of entrepreneurial initiatives in Extension organizations across the United States, this study proposes to explore the relationship between organizational entrepreneurship and organizational performance.

1.2 Problem statement

As society changes, new technologies evolve, and competition increases, the process for carrying out the Extension mission is being challenged (King & Boehlje, 2000). A variety of forces have put extreme pressure on all educational institutions to become more dynamic, especially the Cooperative Extension System (King, 1999). These pressures include rapid development in the availability of information, expectations of faster response time to problems, greater demand for stakeholder involvement in decision making processes, and a changing funding portfolio (King & Boehlje, 2000; Miller, 2005). In a rapidly changing world, organizations need to continually identify new opportunities beyond existing competencies if they are to survive (Hamel, Doz, and Prahalad, 1989; Mintzberg, 1994).

In the *Renewing the Covenant* and *Returning to Our Roots* series, works of the Kellogg Commission (2000) and the NASULGC offered a model that transformed the historic mission of teaching, research, and service into a forward-looking agenda of learning, discovery, and engagement in keeping with the changes that characterize today’s society (Franz, Peterson, and Dailey, 2002). In *The Extension Vision for the 21st*
Century, the ECOP (2002) responded with a proactive report that laid a foundation for Extension’s leadership for community and university-wide engagement. However, King, and Boehlje (2000) predicted that Extension would continue to have difficulty coping with the transition to a marketplace environment. Extension personnel must create a shared vision, be proactive in dealing with the future, support change, champion the holistic view of Extension, and create an environment for innovation (Buchanan, 1993). Encouraging innovative activity involves assessing current strategies and continuously implementing an entrepreneurial process and principles.

1.3 Purpose of the study

The purpose of this study was to explore the relationship between Organizational Entrepreneurship and Organizational Performance in the Cooperative Extension System. This study drew upon the fields of entrepreneurship and organizational performance in private, public, and nonprofit sectors. It focused on the organizational context of entrepreneurship.

1.4 Objectives of the study

The objectives of the study were based on exploring the relationship between Organizational Entrepreneurship and Organizational Performance in Extension. The objectives of this study were to:

1. describe the extent to which organizational-level entrepreneurship was evident in Extension.
2. describe the financial and non-financial dimensions of organizational performance in Extension.

3. describe the relationship between organizational entrepreneurship and organizational performance in Extension.

1.5 Definition of terms

While the term entrepreneurship has been in use for hundreds of years, as a discipline, entrepreneurship research remains in its infancy (Paulin, Coffey, and Spaulding, 1982; Sexton, 1982). Scholars continue to debate such fundamental issues as the definition of entrepreneurship, the nature of the entrepreneur, the relevant unit of analysis when studying entrepreneurship, the purpose of such research, and the environmental conditions that give rise to entrepreneurship, and much more (Amit, Glosten, and Muller, 1993). Entrepreneurship research has focused on different units of analysis, ranging from individuals and teams to organizations and communities (Figure 1.1). Entrepreneurship can be viewed in the context of a range of factors, as it is not an all-or-nothing phenomenon that some individuals, teams, organizations, or communities have and others do not (Stevenson & Gumpert, 1985).
Figure 1.1: Entrepreneurship overview

Entrepreneurship Overview
Economically & Socially Motivated

Individual Entrepreneurs

Intrapreneurs
Individuals & teams in existing organizations

Entrepreneurial Organizations

Entrepreneurial Communities

Entrepreneurial Process
1.5.1 Organizational Entrepreneurship

This study focused on organizational entrepreneurship which includes both entrepreneurial orientation and entrepreneurial management. The term entrepreneurial orientation is defined as organizational behavior patterns that reflect the organization’s commitment to entrepreneurial intensity, which is the combination of entrepreneurial frequency and the degree of entrepreneurship. Entrepreneurial frequency represents the number of entrepreneurial events in which an organization becomes involved, as represented by new products, services, processes, (Jennings & Seaman, 1990). The degree of entrepreneurship is the extent to which any event involves innovativeness, risk taking and proactiveness (Cheah, 1990; Covin & Slevin, 1990; Morris & Sexton, 1996). Entrepreneurial orientation was operationalized using a scale developed by Covin and Slevin (1989).

The term entrepreneurial management is based on Stevenson’s (1983) conceptualization of entrepreneurship as a management approach focused on the pursuit and exploitation of opportunity without regard to resources currently controlled. Stevenson (1983) contrasted entrepreneurial behavior with administrative behavior. He described a continuum with promoter organizations placed at the entrepreneurial end of a spectrum and trustee organizations at the administrative end. Entrepreneurial management was operationalized through a scale developed by Brown et al. (2001) that included sub-dimensions of strategic orientation, resource orientation, management structure, reward philosophy, and entrepreneurial culture.
1.5.2 Organizational Performance

There is a growing body of evidence to suggest that organizational entrepreneurship is positively associated with numerous measures of performance (Davis, Morris, and Allen, 1991; Morris & Sexton, 1996; Zahra, 1986). Because performance is multidimensional, it is advantageous to integrate different dimensions of performance in empirical studies (Cameron, 1978, 1986). Extension organizations are complex and each organization faces a unique set of circumstances. The organizational performance measure for this study included both financial and non-financial indicators.

Financial measures of organizational performance

Federal formula funds remain vital to the overall funding of Extension, leveraging substantial state and local appropriations, as well as laying the foundation for a strong nationwide Cooperative Extension System. Although non-competitive federal funds have remained relatively flat, what has changed is the percentage of the total budget these federal funds now represent in overall Extension funding (17.23% in FY03), as well as the percentage these funds represent within each organization’s overall funding mix (Figure 1.3). Appropriated budget cuts at the federal, state, or local levels have been the driving force for Extension organizations to emphasize non-appropriated funding. Non-appropriated revenue was defined by ECOP’s Personnel and Organizational Development Committee (PODC) as monies that were not appropriated directly to Cooperative Extension or research units by federal, state, and local governments.
Public appropriated funding has shifted and Extension organizations now generate revenue through various funding sources. Part of the funding mix for Extension organizations has been federal financial support in the form of traditional formula funds, as well as in the form of new competitive funding models targeted toward specialized programs. State and local governments also contribute to the funding mix, but the percentage contributed varies across the country. Each organization has responded to a shifting funding mix by developing a variety of approaches that are aimed at maintaining and increasing state and local funds, as well as generating revenue through grants and contracts; fee-based programming and publications; event sponsorships; development of local or state foundation activity; and other types of fund raising. Most 1862 Extension organizations now rely on external grants, contracts, and other non-appropriated funding for a growing portion of Extension budgets.

A Revenue Generation Report (Miller, 2005), based on a survey of Extension leaders conducted from August to December, 2004, indicated a diversity of funding models for Extension organizations in the thirty six states that responded to the survey (Figure 1.3). Changes in funding balance have created management challenges for Extension organizations balancing priorities of new and various funding sources.
Extension organization funding mix

<table>
<thead>
<tr>
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<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
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<tr>
<td>Federal</td>
<td>8.0</td>
<td>41.6</td>
<td>17.6</td>
<td>7.29</td>
</tr>
<tr>
<td>State</td>
<td>19.0</td>
<td>68.0</td>
<td>42.5</td>
<td>10.71</td>
</tr>
<tr>
<td>Local</td>
<td>.0</td>
<td>52.0</td>
<td>19.4</td>
<td>13.24</td>
</tr>
<tr>
<td>Other</td>
<td>.0</td>
<td>46.0</td>
<td>20.4</td>
<td>13.64</td>
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*Figure 1.2: Funding mix in Extension organizations – percentages of federal, state, local, and other funding*
Non-financial measures of organizational performance

With vastly different scenarios in the mix of funding from state to state, this study also explored non-financial measures of organizational performance. A Performance Satisfaction index was developed for this study, in order to try to capture the complex indicators of performance in Extension organizations. The index included satisfaction with overall performance; retaining key employees; delivering new programs, products or services for external audiences; improving internal processes; gathering and using knowledge; and managing change. Satisfaction is a fundamental measure of the perception of successful performance, and has been presented within the framework of discrepancy theory, whereby there may be a perceptive gap between what an individual has and what they want to have (Cooper & Artz, 1995). This gap may exist relative to either specific goals or general expectations (Cooper & Artz, 1995). While the combined scale represents complex factors of organizational performance, the collective dimension allows for organizations to report on indicators that best align with the unique opportunities and objectives being addressed during the five year time period from 2000 to 2004.

1.6 Significance of the study

This study aimed to contribute to Extension organizational development, as well as to the literature on organizational entrepreneurship. The study explored the relationship between Organizational Entrepreneurship and Organizational Performance. Because a positive relationship was found, the Organizational Entrepreneurship
framework can be used to address factors that stimulate or inhibit entrepreneurship in Extension. Findings can guide Extension organizations in making decisions and developing behaviors that enhance Extension activities, increase non-appropriated funding, and better leverage federal, state, and local funding to continue fulfilling the mission of the organization.

Modern organizations need to operate as entrepreneurial businesses that are stable across situation and time (Scase, 2000). The literature on Organizational Entrepreneurship evolved from the innovation, strategic change, and strategic management literature and has focused on entrepreneurial activities within an organization in order to maximize performance. Organizations developing a continuous entrepreneurial process that infiltrates and permeates the entire organization will realize a number of benefits (Kuratko, Ireland, and Hornsby, 2001). This study extended research focusing on the private, public, and nonprofit sectors to continue building on research by exploring theory and application.
CHAPTER 2

REVIEW OF LITERATURE

This Chapter examines the literature to develop a framework for this study. This literature review begins with an exploration into the broad field of entrepreneurship and then moves to specific organizational factors that foster entrepreneurship and influence organizational performance. This chapter is organized in the following sections:

2.1 Historical perspectives on entrepreneurship
2.2 Entrepreneurial individuals and teams
2.3 Entrepreneurial organizations
2.4 Entrepreneurship in public and not-for-profit organizations
2.5 Opportunity-based view of entrepreneurship
2.6 The entrepreneurial process
2.7 Entrepreneurial Orientation
2.8 Entrepreneurial Management
2.9 Organizational Performance
2.10 Summary of literature review
2.1 Historical perspectives on entrepreneurship

The term “entrepreneurship” can be traced back to the twelfth century, rooted in the French verb “entreprendre” which means to do something differently (Long, 1983), and the German word “unternehmen,” which means to “undertake” (Cunningham & Lischeron, 1991). Its noun form “entrepreneur” was documented in the fourteenth century (Hoselitz, 1960). The modern term “entrepreneur” was used during the eighteenth century in the writings of Richard Cantillon (1755/1931).

The entrepreneurial conceptualization reflected in the literature has emerged from a diversity of scholarly disciplines and perspectives, beginning with origins in economics. In the mid-1700s, Cantillon (1755/1931), an Irish economist of French descent, defined the term entrepreneur as a speculator searching for profit by buying at a certain price and selling at an uncertain price. In the early 1800s, Say (1803/1971) expanded the concept of entrepreneurship, to include managerial skills and other qualities such as judgment and perseverance to create value in an economy by moving resources out of areas of low productivity and into areas of higher productivity and greater yield. In the mid-1800s economist Mill (1848/1965) suggested that the distinguishing feature of an entrepreneur was that they were more than a capitalist in that they assumed both the risk and the day-to-day operations or management of a business. British economist Marshall (1930/1961) defined the entrepreneurial function as providing innovations for efficiency and consequently progress.

Knight (1921), the first American contributor in entrepreneurship theory, discussed foresight and distinguished between risk, which is insurable, and uncertainty,
which is not, and noted that the entrepreneur is one who bears all uncertainty and makes
decisions for which he takes responsibility. Schumpeter (1934) saw the entrepreneur as
the major agent of economic development, an innovator trying new combinations of
resources to generate new products, new production methods, entry into new markets,
new sources of supplies, and new organizations of any industry. Kirzner (1973, 1997),
an Austrian economist, emphasized alertness and suggested that the role of the
entrepreneur was an arbitrageur who created incremental-continuous innovations by
identifying and exploiting potential opportunities. Casson (1982) attempted to develop a
theory linking entrepreneurs with economic development, emphasizing resource
coordination and decision making.

2.1.1 Economists

Entrepreneurship has been recognized as a dynamic, developing part of the
economy, frequently captured through formal economic indicators. Small businesses
make significant contributions to the economy, as reported by Birch (1979) in the *Job
Generation Process*, and Storey (1994), who synthesized a number of studies in
*Understanding the Small Business Sector*. According to the Panel Study of
Entrepreneurial Dynamics (PSED), as of the late 1990s, approximately 10.1 million
adults in the United States were attempting to create a new business at any given time
(Reynolds, Carter, Gartner, and Greene, 2004). However, Drucker (1985), Hornaday
(1992), and Venketaraman (1997) stated that not every new small business was
entrepreneurial nor represented entrepreneurship. Also, the activities of informal
entrepreneurs are rarely quantified or recorded because informal entrepreneurs see their activity less as businesses and more as small-scale or erratic ways one works to make a little money that is not worth reporting (Edgcomb & Thetford, 2004). Economists focus on market factors and consider the entrepreneur as a rational agent contributing to economic activity (Herron, Sapienza, and Smith-Cook, 1991).

2.1.2 Psychologists

The psychological approach to entrepreneurship looks upon venture creation as the manifestation of personality characteristics of the individual (Kets de Vries, 1977). McClelland (1961) explored the “need for achievement” and conducted a cross-cultural study on characteristics of successful entrepreneurs regardless of country and type of business, which identified nine competencies categorized within proactivity, achievement orientation and commitment to others (McClelland, 1987). Hornaday and Aboud, (1971) added core aspects of the entrepreneur, such as autonomy, aggression, and innovation. Borland (1974) used the words “internal locus of control.” Timmons (1978), added characteristics such as self confidence, goal-orientation, creativity, and moderated risk taking to the definition. Sexton and Bowman-Upton (1991) used the adjectives energetic and ambitious, explaining the entrepreneur as someone who had tolerance for ambiguity and reacted positively to setbacks. Welsh and White (1981) explained entrepreneurs as individuals who sought responsibilities and embraced challenges.
2.1.3 Sociologists

Sociologists have focused on social conditions which enable entrepreneurship, seeing entrepreneurial activity as a product of structural conditions and social factors (Gerschenkron, 1965; Reynolds, 1991; Shapero & Sokol, 1982; Weber, 1947). Granovetter (1995) argued that an environment that affords profits is not a sufficient condition for organizational survival, but it is more important to consider the social structure within which individuals and groups try to construct it.

2.1.4 Management specialists

From the management perspective, entrepreneurship is an organizational process that encourages and practices innovation, risk taking, and proactiveness toward customers, competition, and opportunities (Miller & Friesen, 1982). The process enables the organization to create value by identifying market opportunities and creating unique combinations of resources to pursue those opportunities (Jacobson, 1992). An entrepreneurial organization is proactive in obtaining intelligence on customers and competitors; is innovative by reconfiguring its resources to formulate a strategic response; and implements the response, which entails some degree of risk and uncertainty (Barrett, Balloun, and Weinstein, 2003). The management perspective of entrepreneurship emphasizes organizational factors as facilitating the success or failure of ventures (Brophy & Shulman, 1992; Sandberg, 1992). Miller (1983) suggested that the degree of entrepreneurial orientation could be seen as the extent to which organizations take risks, innovate, and act proactively. Stevenson (1983) added that entrepreneurial
management, defined as a set of opportunity-based management practices, could help organizations remain vital and contribute to organizational and societal level value creation.

Within management literature, advocates of corporate entrepreneurship stress its importance for rejuvenating and revitalizing existing organizations (Maes, 2004). Zahra (1991) observed that corporate entrepreneurship may be formal or informal activities aimed at creating new business in established companies through product and process innovations and market developments. It is brought into practice as a tool for business development, revenue growth, profitability enhancement, and pioneering the development of new products, services and processes (Kuratko, Montagno, and Hornsby, 1990; Lumpkin & Dess, 1996; Miles & Covin, 2002; Zahra, 1991; Zahra & Covin, 1995; Zahra et al., 1999). The pursuit of corporate entrepreneurship has arisen from a variety of challenges including global competition, interest in organizational efficiency for greater profitability, dramatic changes in the marketplace, perceived limitations in the traditional methods of corporate management, and the exodus of innovative-minded employees who are disenchanted with bureaucratic organizations (Morris & Kuratko, 2002).

2.2 Entrepreneurial individuals and teams

Early research focused on traits and actions of the individual entrepreneur (Cole, 1946; Collins & Moore, 1970; Hartman, 1959; Schumpeter, 1942). Some authors have advocated that it is individuals who carry out entrepreneurial initiatives (Schumpeter, 1934). While there is no single prototype of the entrepreneur (Bird, 1989), research has
explored many variables, including individual characteristics (Cantillon, 1755/1931; Drucker, 1985; Hornady & Abound, 1971; Knight, 1921; McClelland, 1987), perceived barriers (Hannan & Freeman, 1989; Kouriloff, 2000; MacMillan, Block, & Narasimha, 1986; Porter, 1990; Shapero, 1984), motivations, aspirations, competencies, stage of development, and ways of thinking (Gartner, 1988; Zahra, Jennings, and Kuratko, 1999).

The cognitive approach to entrepreneurship is concerned with the entrepreneur’s preferred way of gathering, processing, evaluating, and storing information (Allinson, Chell, and Hayes, 2000; Krueger, 2000; Stevenson & Jarillo, 1990; Venkataraman, 1997).

Entrepreneurs are driven by a variety of forces, including economic motives such as independence (Collins & Moore, 1964); financial survival or wealth; social causes (Dees, Emerson, and Economy, 2001); or other personal drives such as preferred lifestyle (Reynolds & White 1997) or achievement (McClelland, 1961). Vesper (1980) and Gartner, Mitchell, and Vesper (1989) emphasized the diversity among entrepreneurs and entrepreneur types. Self-employed, lifestyle entrepreneurs have different aspirations, expectations, and needs compared to high-growth oriented, job-creating entrepreneurs (Vesper, 1980). Job-creating, fast-growing entrepreneurs have been referred to as gazelles (Birch, 1987) and described by Kuratko and Hodgetts (1998).

Aspirations and expectations may also vary based on stage of venture development. Potential or “intending entrepreneurs” are individuals who, at a particular time, have a preexisting preparedness, but not salient intention, to start a business (Krueger, 1993). Intention is not necessarily a dichotomy; it can be a continuum
(Shapero & Sokol, 1982; Krueger, 1993). A precipitating event (Shapero, 1984), may prompt an individual to take entrepreneurial action. Nascent entrepreneurs are those individuals who are in the early process of exploring or developing a new venture (Katz & Gartner, 1988). On the other end of the spectrum, serial entrepreneurs have more than one entrepreneurial experience such as establishing, purchasing, inheriting, or investing in a new business (Delmar & Davidsson, 2000; Westhead & Wright, 1998).

Various scales and instruments have been developed to predict and explain individual entrepreneurship, including McClelland’s (1987) characteristics of successful entrepreneurs; the Entrepreneurial Attitude Orientation© (EAO) which measures entrepreneurship based on attitude rather than personality theory (Robinson, Stimpson, Huefner and Hunt, 1991); the Entrepreneurial Quotient© (EQ), which is a test of how one’s self-perception and personal characteristics compare with those of successful entrepreneurs (Fasiska, 1992); the Carland Entrepreneurship Index (Carland, Carland, and Hoy, 1992); the Bolton Thompson Entrepreneur Indicator (BTEI), which is based on the six character themes of focus, advantage, creativity, ego, team, and social (Bolton & Thompson, 2000); the Entrepreneurial Profile Questionnaire (EPQ), which is designed to survey the effect of individual, societal and environmental factors on entrepreneurial expansion plans (Welsch, 1998); and other instruments such as the Cognitive Style Index (Allinson & Hayes, 1996); the Herrmann Brain Dominance Instrument© (HBDI™), which measures the preference for certain activities (Herrmann, 1996); the Jackson Personality Inventory (Jackson, 1976); and the Myers-Briggs Type Indicator© (MBTI™), which is based on Jung’s personality types (Myers, 1962).
Individual entrepreneurship has also been explored through studies on intrapreneurship. Harvey and Drolet (1994, p.155) defined the intrapreneur as “the internal organizational version of the entrepreneur.” The intrapreneurship school of entrepreneurship evolved in response to the lack of innovativeness and competitiveness within organizations (Kuratko, Montagno, and Hornsby, 1990; Pinchot, 1985). Intrapreneurship involves the development of independent units designed to create, market, and expand innovative services, technologies, or methods within the organization (Nielsen, Peters, and Hisrich, 1985). Pinchot (1985) coined the term “intrapreneur” and defined intrapreneurs as people who take hands-on responsibility for creating innovation of any kind within an organization.

DeChambeau and Mackenzie (1986) advocated that intrapreneurial activity ranged from the development of a new product to the creation of a more cost-efficient process. Despite the lack of a clearly accepted definition of the term intrapreneur or institutional entrepreneur (DiMaggio, 1988; Zucker, 1991), the literature revealed three trends in the research (Carrier, 1996). The first group of authors presented intrapreneurship as a set of psychological characteristics and personal attributes (Pinchot, 1985). Although it was not always explicit in their work, many of these authors seemed to believe that the psychological profiles of intrapreneurs and entrepreneurs were fairly similar, even though the contexts in which they act were different (Carrier, 1996). The second group of authors concentrated on the roles and functions of intrapreneurs, and presented them as visionaries, change agents, and champions of innovation (Lee & Zemke, 1985; Lessem, 1987). The third group of authors highlighted the importance of
organizational factors for the pursuit of intrapreneurship (Antoncic & Hisrich, 2001; Slevin & Covin, 1989). Entrepreneurship within an existing organization is not only possible, but may even be crucial for the success of the organization (Pinchot, 1985). Intrapreneurship is important for organizational survival, growth, profitability, and renewal (Zahra, 1995).

A shift of research attention from the individual to the entrepreneurial team gained momentum from outside the field of entrepreneurship. Promoting collective entrepreneurship as a solution to problems of national competitiveness, Robert Reich (1987) cast “the team as hero” and argued that economic success came through the talent, energy, and commitment of a team rather than through the solo efforts encouraged by the myth of the entrepreneurial hero. Scholarly attention to entrepreneurial teams increased after the 1980s, a time period when new enterprises were frequently launched by teams rather than solo founders (Ensley, Carland, Carland, and Banks, 1999). A team that is entrepreneurial is one that is focused on proactively and creatively seeking opportunities to bring into existence future goods and services (Stewart, 1989). The ability of an entrepreneurial team to assess and manage risk is most important for ventures operating in turbulent environments (Dubin, 1989).

Timmons, Smollen, and Dingee (1977) argued that the success of entrepreneurship was a result of the interaction between entrepreneurial team characteristics and product and market characteristics. Recent research has concluded that teams are central to the understanding of what makes an organization entrepreneurial (Anderson & West, 1998; Brown & Eisenhardt, 1995; Senge, 1990). Mossaver-Rahmani (1995) identified
various pay-offs for creating intrapreneurial teams including increased ideas, energy, and experimentation; increased commitment and ownership; increased integration and performance. Organizations like Extension can excel through successful teams (Franz, 2004).

2.3 Entrepreneurial organizations

The idea of entrepreneurship inside an organization has been presented by authors such as Kanter in *The Change Masters* (1983) and *When Giants Learn to Dance* (1989). The entrepreneurial literature claims that entrepreneurial organizations are characterized by a set of organizational attitudes and behaviors (Covin & Miles, 1999; Covin & Slevin, 1989; Kuratko, Naffziger, and Montagno, 1993; Lee, Lee, and Pennings, 2001; Lumpkin & Dess, 1996; Lyon, Lumpkin, and Dess, 2001; Miller, 1983; Morris & Jones, 1999; Stevenson & Gumpert, 1985; Stevenson & Jarillo, 1990). Entrepreneurial organizations demonstrate competencies such as opportunity recognition (Miller, 1983; Stevenson & Jarillo, 1986), organizational flexibility (Murray, 1984; Naman & Slevin, 1993; Stevenson & Gumpert, 1985), and the ability to measure, encourage, and reward innovative behavior (Zahra, 1993). Drucker (1985) pointed out that entrepreneurship was based upon the same principles, whether the entrepreneur was an existing large organization or an individual starting a new venture. Entrepreneurial management is relevant to all types of organizations, regardless of whether the organization is a for-profit business, a public-service agency, a nonprofit group or a governmental institution.
Definitions from the literature that describe the entrepreneurial efforts associated with existing organizations and confirm the possible integration between organizational management and entrepreneurship include corporate entrepreneurship (Burgelman, 1983; Carrier, 1996; Covin & Miles, 1999; Covin & Slevin, 1991; Dess, Lumpkin, and McGee, 1999; Hisrich & Peters, 1986; Hornsby, Kuratko, & Zahra, 2002; Zahra, Ireland, & Hitt, 2000); corporate venturing (MacMillan, Block, and Narasimha, 1986; Miles & Covin, 2002; von Hippel, 1977); strategic entrepreneurship (Guth & Ginsberg, 1990; Hitt, Ireland, Camp, and Sexton, 2002; Murray, 1984); innovative management (Khandwalla, 1977); entrepreneurial strategic posture (Covin & Slevin, 1991); strategic behavior (Burgelman, 1983); entrepreneurial strategy making (Dess, Lumpkin, and Covin, 1997); entrepreneurial orientation (Covin & Slevin, 1986; Khandwalla, 1977; Lumpkin & Dess, 1996; Miller 1983; Miller & Friesen, 1978); and entrepreneurial management (Stevenson & Jarillo, 1990; Michael, Storey, and Thomas, 2002).

Entrepreneurial organizations are flexible and adaptable, far from the bureaucratic and mechanistic organization (Birch, 1987). When contrasting traditional organizations with entrepreneurial organizations, complex issues do not lend themselves to concise definitions (Cornwall & Perlman, 1990). However, descriptions focusing on various organizational factors evolve throughout this paper. While there is no single agreed upon method for measuring organizational entrepreneurship, there are various instruments that assess a number of critical factors, such as entrepreneurial orientation (Figure 1.2). The Entrepreneurial Performance Index (EPI) captures both the degree and the frequency of entrepreneurship, as well as the underlying dimensions of innovativeness, risk taking, and
proactiveness (Morris & Sexton, 1996). The Corporate Entrepreneurship Assessment Instrument (CEAI), developed by Kuratko et al. (1990) is a diagnostic tool for evaluating how supportive the corporate environment is, based on management support of organizational entrepreneurship; work discretion; rewards and reinforcements; time availability; organizational boundaries.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Contributors</th>
<th>Organizational Factors</th>
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<tbody>
<tr>
<td><strong>Entrepreneurial Orientation</strong></td>
<td>Khandwalla (1977); Miller &amp; Friesen (1978; 1982); Miller (1983); Covin &amp; Slevin (1986; 1989; 1990; 1991); Lumpkin &amp; Dess (1996; 1997)</td>
<td>risk taking, proactiveness, innovativeness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>competitive aggressiveness, autonomy</td>
</tr>
<tr>
<td><strong>Entrepreneurial Management</strong></td>
<td>Brown, Davidsson, &amp; Wiklund (2001)</td>
<td>strategic orientation, resource orientation, management structure, reward philosophy, growth orientation entrepreneurial culture</td>
</tr>
<tr>
<td><strong>Entrepreneurial Performance Index (EPI)</strong></td>
<td>Morris (1996)</td>
<td>Degree of entrepreneurship (company characteristics and behaviors: underlying dimensions of innovativeness, risk taking, and proactiveness, as well as structure, and reward, strategic &amp; resource orientations)</td>
</tr>
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<td></td>
<td></td>
<td>Frequency of entrepreneurship (new product, service and process introductions)</td>
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<td><strong>The Corporate Entrepreneurship Assessment Instrument (CEAI)</strong></td>
<td>Kuratko, Montagno, &amp; Hornsby (1990); Hornsby et al. (1992)</td>
<td>management support of organizational entrepreneurship; work discretion; rewards and reinforcements; time availability; organizational boundaries</td>
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*Table 2.1: Summary of organizational entrepreneurship scales*
2.4 Entrepreneurship in public organizations

The literature has expanded to include the development of frameworks for the emergence of entrepreneurship within the public and nonprofit sectors (Borins, 1998; Boyett, 1996; Dees, Emerson, and Ecnomy, 2002; Forster, Graham, and Wanna, 1996; Graham & Harker, 1996; Morris & Jones, 1999; Morris & Kuratko, 2002). Similar to research focused on the private sector, the literature includes references to individuals, organizations, the process, and strategies.

Catford (1998) noted that social and economic entrepreneurs share the same focus on vision and opportunity and the same ability to convince and empower others to help them turn these visions into a reality. Social entrepreneurs share many similarities to economic entrepreneurs operating in the private sector. Brinckeroff (2000, p. 12) described social entrepreneurs as individuals who were constantly looking for new ways to serve their constituencies and to add value to existing services; who were willing to take reasonable risk on behalf of the people their organization serves; who understood that all resource allocations were really stewardship investments; who weighed the social and financial return of each of these investments; and who always kept the mission first, but recognized that without money, there was no mission output. Schuyler (1998) suggested that social entrepreneurship focused on profit as a means, and not an end.

Publications from the Roberts Enterprise Development Fund mentioned various terms to describe similar entrepreneurial activities, including: social purpose venture; community wealth venture; nonprofit enterprise (Emerson & Twersky, 1996). Additional terms include venture philanthropy, caring capitalism, social enterprise (Cannon &
Fenoglio, 2000), and civic entrepreneurship (Henton, Melville, and Walsh, 1997).

Henton et al. (1997, p.1) spoke of a civic entrepreneur as a “...leader who forged new,
powerfully productive linkages at the intersection of business, government, education,
and community.” In spite of the varying definitions of social entrepreneurship, the
commonality is the problem-solving nature of social entrepreneurship and the emphasis
on developing and implementing initiatives that produce measurable results in the form
of changed social impacts (Johnson, 2000).

The concept of public entrepreneurship has been defined in a variety of ways,
including the process of creating value for citizens by bringing together unique
combinations of public and private resources to exploit social opportunities (Bellone &
Goerle, 1992; Linden, 1990; Morris & Jones, 1999; Osborne & Gaebler, 1992). The term
public implies that an organization is accessible to or shared by all members of a
community. In the literature on entrepreneurial public management, scholars emphasize
different strategies, depending on whether they focus on launching innovations (Borins,
1998; Levin & Sanger, 1994), managing effective programs (Behn, 1991), or improving
overall organizational performance (Light, 1998; Moore, 1995; Osborne & Plastrik,
1997).

There have always been elements of innovation and entrepreneurship in public
sector organizations (Jordan, 1990; Moore, 1983). Creating value for customers, putting
resources together in unique ways, and being opportunity-driven are not inherently in
conflict with the purpose of public agencies (Morris & Kuratko, 2002). The term
entrepreneurship has appeared in the public administration literature with increasing
frequency (Morris & Kuratko, 2002), identifying pioneers which have affected dramatic change in public sector organizations (Cooper & Wright, 1992; Doig & Hargrove, 1987; Lewis, 1980; Ramamurti, 1986). The factor that differentiates public entrepreneurs from ordinary managers is their ability to alter the existing allocation of scarce resources in fundamental ways (Lewis, 1980, p. 233). Looking beyond the function of any one person, other authors link the efforts of groups that influence significant reallocation of societal resources for meaningful social, political, or economic change (Drucker, 1995; Wilson, 1973).

Another approach can be found in the “reinventing government” literature popularized by Carroll (1996), Fox (1996), Osborne and Gaebler (1992). A stream of research suggests that entrepreneurship is linked to strategic management that enables public sector organizations to identify new opportunities and generate new process and service innovations (Behn, 1991; Mokwa & Permut, 1981; Nutt & Backoff, 1993). Stevenson et al. (1989) at Harvard described public sector entrepreneurship as the process of creating value for citizens by bringing together unique combinations of public and/or private resources to exploit social opportunities. When applied to existing public organizations, entrepreneurship takes on distinct characteristics (Bower, 1977; Cullen & Cushman, 2000; Frederickson, Rainey, Backoff, and Levine, 1976) and strategic approaches to management are necessary if entrepreneurship is to be facilitated on an ongoing basis (Cornwall & Perlman, 1990; Jennings & Seaman, 1990; Tropman & Morningstar, 1989).
Advocacy for public sector entrepreneurship was supported through the work of Linden (1990), who proposed an operational action agenda for public sector managers that began with strategic thinking and acting, and then led to creating a felt need for change, introducing structural changes to reinforce and validate new approaches, dealing with risk, and using political skills. In the book, *Reinventing Government*, Osborne and Gaebler (1992) suggested that government organizations could be transformed by focusing on outcomes, customer orientation, proactiveness, and other market mechanisms. In 1999, a large cross-section of public sector managers was surveyed to identify organizational characteristics associated with entrepreneurship in the public sector. A customer focus, efficient operations, a strong leader at the top, and good planning systems, were identified as leading characteristics of an entrepreneurial organization. The highest ranking obstacles to entrepreneurship, as rated by these managers, included policies, procedures, personnel restrictions, and reward limitations. Entrepreneurial governance brings a flexible, dynamic, and innovative approach to the process by which complex problems are collectively solved and society’s needs are met (Morris & Kuratko, 2002). Cullen and Cushman, (2000) discussed strategic approaches for organizations to make a transition from traditional function-driven management to more competitive performance-driven management.

Entrepreneurship is a universal construct that can be applied in public sector organizations (Morris & Kurako, 2002). As public sector organizations face a turbulent external environment with eroding tax bases, heightened accountability, rapidly changing technology, and increasingly diverse audiences to serve, entrepreneurship can be an
integral component that leads to generating alternative revenues, improving internal processes, and developing innovative solutions to meet social and economic needs. Because there are fundamental differences in organizational realities, public sector organizations benefit from addressing unique approaches and outcomes. Bellone and Goerle (1992, p.133) noted that “a strong theory of public entrepreneurship requires a strong theory of citizenship.” Interest in public sector entrepreneurship and innovation continues to grow through research such as Zegans’s (1992) report on innovation in the well-functioning public agency, through debates such as that presented by Borins (2000), and through new initiatives such as the Government Innovators Network, The Center for The Business of Government, the Social Enterprise Initiative at Harvard Business School, the Center for the Advancement of Social Entrepreneurship at Duke University and Stanford’s Social Innovation Review.

Interest in organizational entrepreneurship is also being explored in nonprofit organizations and institutions of higher education. Just as there are a variety of for-profit and public organizations, there are a variety of nonprofit organizations. Generally, they differ from traditional businesses in that they are governed by a board of directors, they have multiple goals beyond selling products and services, and they are driven by multiple constituencies rather than solely on the economic market (Cornwall & Perlman, 1990). Similar to public agencies, many nonprofit organizations are facing increased accountability, as well as other various external and internal challenges. The emergence of public sector entrepreneurship has also led to interest in entrepreneurship in the context of higher education. The education environment is evolving as new learning
methods, budget constraints, changes in demands based on life long learning precepts and
other factors stimulate entrepreneurship. Institutions of higher education can promote or
constrain entrepreneurial behavior as they preserve traditional values of education and
meet evolving demands of post-secondary education.

2.5 Opportunity-based view of entrepreneurship

The discovery, evaluation, and exploitation of opportunities are defining features
of entrepreneurship (Shane & Venkataraman, 2000). Contemporary definitions of
entrepreneurship tend to center around the pursuit of opportunity (Brazael, 1999; Brown
at al., 2001; Churchill & Muzyka, 1994; Shane & Venkataraman, 2000; Venkataraman,
1997). The opportunity-based conceptualization of entrepreneurship was first identified
by Kirzner (1973) and further developed by the Harvard professor Howard Stevenson
(1983). Kirzner (1973) defined entrepreneurship as the alertness to new opportunities.
Research has indicated that entrepreneurial activity within organizations is viewed as a
distinct mode of management based on opportunities (Stevenson & Jarillo, 1990).
Stephenson and Jarillo (1990) defined opportunities as future situations which are
deemed desirable and feasible.

An entrepreneurial opportunity consists of a set of ideas, beliefs, and actions that
enable the creation of future goods and services (Venkataraman, 1997). Entrepreneurial
opportunities have been defined as situations in which new goods, services, raw materials,
markets, and organizing methods can be introduced through the formation of new means,
ends or means-ends relationships (Casson, 1982; Shane & Venkataraman, 2000).
Entrepreneurial opportunity can be viewed from an allocative perspective in which
opportunities are recognized through deductive processes (opportunity recognition), a market perspective in which opportunities are recognized through as a discovery process (opportunity discovery), or a market perspective in which opportunities are recognized through a creative process (opportunity creation).


Researchers have examined various issues related to entrepreneurship and opportunities (Long & Graham, 1988); information search strategies (Busenitz, 1996); opportunity evaluation (Crawford, 1980); social networks (de Koning, 1999; Hills, Lumpkin, & Singh., 1997; Low & MacMillan, 1988; Singh, Hills, & Lumpkin, 1999); entrepreneurial alertness (Gaglio & Katz, 2001; Kirzner, 1973); opportunity identification process (Herron & Sapienza, 1992); prior knowledge and opportunity discovery (Shane, 2000); cognitive processes and opportunity identification (Baron, 1998; de Koning, 1999); a combination of social networks, prior knowledge, creativity, and optimism (Ardichvili, Cardoza, and Ray, 2003); analysis of trends for opportunity recognition
(Bluedorn et al., 1994); opportunity evaluation and uncertainty absorption (Barringer & Bluedorn, 1999); market orientation for continuous customer, competitor, and market intelligence (Jaworski & Kolhi, 1993; Slater & Narver, 1995); and environmental scanning for external opportunities and internal sources of value (Hambrick, 1982; Morris & Kuratko, 2002).

Past empirical research related to opportunity recognition has focused on the variety and quantity of opportunities recognized (Hills & Shrader, 1998; Singh et al., 1999); the importance of the creative discoveries (Amabile, 1990); incremental and innovative opportunities (Gaglio & Katz, 2001); innovation (Fiet, 2002; Shane, 2000); and stages of opportunity recognition (Lumpkin, Hills, and Shrader, 2004). Measures of opportunity perception correlate with measures of innovation, proactiveness, and risk taking (Krueger, 2000).

2.6 The entrepreneurial process

The entrepreneurial process defined by Bygrave and Hofer (1991) focuses on the functions, activities, and actions associated with perceiving opportunities and creating teams and resources that exploit them. Although each element of the entrepreneurial process may appear to be a separate element, they are all inter-related and part of a very dynamic, contextual, holistic process (Figure 2.1).
2.6.1 Stages of the process

The process begins with a focus on stakeholders and the recognition, discovery, and creation of opportunities through divergent thinking and new ideas. The next stage of the entrepreneurial process involves seizing opportunities through experimenting and developing new (or new combinations of) programs, products, services, packaging, pricing, location, resources, marketing strategies, processes, methods, structures, or other incremental or radical innovations that produce value for stakeholders (Rogers & Shoemaker, 1971; Whipp & Clark, 1986). In order to make innovation a reality, the next
area of emphasis is strategy, which is the continuous co-aligning of the organization and its environment (Thompson, 1967). Organizational theory has consistently conveyed how external changes lead to internal adjustments in strategy, structure, and operational methods (Emery & Trist, 1965; Lawrence & Lorsch, 1967; Morris & Jones, 1999; Thompson, 1965). Entrepreneurship theory, takes this idea a step further, distinguishing between reactive and proactive behavior in which organizations take actions that create changes in the environment.

To realize the potential of opportunities, innovations, and strategies, the next inter-related stage emphasizes operations. It is at this point that various business functions become operational. While for some organizations, the emphasis is on production and supply chain management, for public and nonprofit organizations, this stage focuses on human resource practices; marketing and communications; financial, legal and risk management; data and technology management; and a variety of activities and logistics that support administration, service delivery, and program development, coordination, and evaluation.

2.6.2 Changing environment

Other vital elements of the entrepreneurial process include a changing environment, continuous learning, decision making, and organizational change. The changing environment includes both internal and external factors that influence the entrepreneurial process. The external environment consists of a myriad of forces that present threats and opportunities. Management research on the environment has
encompassed three perspectives (Bourgeois, 1980) including a perspective focused on groups external to the organization such as customers, competitors, suppliers, regulatory agencies, and other stakeholders; a second perspective focused on attributes of external forces described as complexity, intensity, dynamism, turbulence, hostility, or munificence (Dess & Beard, 1984); and a third perspective concerned with managerial perceptions about these environmental attributes, exemplified by Swamidass and Newell's (1987) construct of perceived environmental uncertainty (Ward, Duray, Leong, and Sum, 1995). These external forces can influence strategy as well as operations such as the cost of doing business and labor availability. The internal environment has also been investigated, focusing on factors such as decentralization, formalization, and inter-functional coordination or connectedness (Jaworski & Kohli, 1993). The continuous alignment between organizational capabilities and resources and the environment remains a central tenet of major strategic management paradigms (Bourgeois, 1985). The consequences of not co-evolving with the environment are evident in the demise of many once prosperous organizations (Nadler & Tushman, 1983).

2.6.3 Continuous learning

As Minniti and Bygrave (2001, p.7) stated, “entrepreneurship is a process of learning, and a theory of entrepreneurship requires a theory of learning.” Organizational learning is considered necessary for continued innovation and sustained entrepreneurial success (Hitt et al., 2002; Nonaka & Takeuchi, 1995). Although a complex phenomenon, organizational learning is vital for entrepreneurial ventures (Lumpkin & Lichtenstein,
Organizations that are not able to embrace shared learning disappear (Sandelands, 1999). During the past few decades there has been an increasing interest in the process of learning within the organizational context, encouraged by the belief that learning and innovation are essential to survive in competitive and dynamic environments (Lipshitz, Popper, and Oz, 1996).

The construct of a learning orientation has three dimensions, including commitment to learning; shared vision; and open-mindedness (Baker & Sinkula, 1999). The open-mindedness construct is described in the literature as closely linked to the concept of unlearning (Sinkula, Baker, and Noordewier, 1997), which is the ability of the organization to dispose of obsolete knowledge, thus opening space for new learning (Huber, 1991; Baker & Sinkula, 1999). To succeed, attention must be given to individual, team, and organizational learning (Lawrie, 1990). Organizational learning occurs through stages of information acquisition, information dissemination, shared interpretation, focused experimentation, diffusion of experience, and knowledge restructuring (Sinkula, 1994; Slater & Narver, 1995). Knowledge, derived from learning, is potentially the most productive resource of an organization (Barney, 1991; Grant, 1996).

The importance of individual and organizational learning has been emphasized by numerous scholars (Adler & Cole, 1993; Stata, 1989; Ulrich, von Glinow, and Jick, 1993). Various definitions have emphasized the importance of acquiring, improving, transferring, and facilitating individual and collective learning. This is followed by integrating and modifying behaviors and practices so that the enhanced learning yields
performance gains (Applebaum & Reichart, 1998; Baker & Sinkula, 1999; Ellinger, Ellinger, Baiyin, and Howton, 2002; Marsick & Watkins, 1999; Pettigrew & Whipp, 1999). Theories of entrepreneurial learning, learning organizations, and organizational learning provide insight into enhancing continuous learning that supports the entrepreneurial process.

Entrepreneurial learning has focused on the individual adult learner who can benefit from a cumulative learning based on the ongoing process of experience, reflection, learning, and action (Kolb, 1984; Mezirow, 1991). Learning tasks during the entrepreneurial process involve learning about oneself, the organization, the environment, business management, and relationships with key stakeholders (Cope, 2005). Adult learning can be formal or informal, intended or incidental, and is “an individual’s personal discovery of meaning” (Combs & Snygg, 1959, p. 9). Although there is no common definition of learning style (Claxton & Murrell, 1987), Ulrich and Cole (1987) emphasized the importance of learning style preference in enhancing entrepreneurial propensity. Learning styles encompass cognitive (Gagne, 1977), affective (Combs, 1959; Gagne, 1977), behavioral (Gagne, 1977), and physiological traits that served as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment. Because many individuals have limited entrepreneurial education and experience, organizations must provide opportunities for personnel to continually learn as new competencies are needed to exploit opportunities.

Continuous learning also occurs at the team and organizational levels. A learning organization is “one that learns continuously and transforms itself” (Watkins & Marscik,
The concept of the learning organization has been linked to market orientation, entrepreneurial culture, flexible organic structures, and facilitative leadership (Lundberg, 1995; Luthans, Rubach & Marsnik, 1995; Slater & Narver, 1995). Leaders of an organization that strives to be a learning organization should be able to create an environment in which questioning current truths and assumptions is the norm and challenging the status quo is expected (Senge, 1990; Slater & Narver, 2000).

Organizational learning, a term sometimes used interchangeably with the term learning organization, is a complex concept that describes the activities of the organization that change behavior (Levitt & March, 1988). Initial contributors to the concept of organizational learning included Argysis and Schon (1978) who introduced double-loop learning; Senge (1990), who authored *The Fifth Discipline* and Pedler, Burgoyne and Boydell (1991) who advocated the notion of the learning company. The literature has addressed various areas of focus such as organizational learning as a process or system (Schon, 1971); collectivity of individual learning (Argysis & Schon, 1996); knowledge management (Fiol, 1994); learning for continuous improvement (Peddler et al., 1991); and deuteron-learning which is concerned with learning how to learn (Bateson, 1972).

Marsick and Watkins, (1999) proposed actions that include creating continuous leaning opportunities; promoting inquiry and dialogue; encouraging collaboration and team learning; establishing systems to capture and share learning; empowering people toward a collective vision; connecting the organization to its environment; highlighting leaders who model and support learning at the individual, team, and organizational levels.
Organizational learning has also been described as a process by which the organizational knowledge base is developed (Shrivastava, 1983). Knowledge-based capabilities of the organization include employee knowledge and skills; technical information systems; information management systems; and information norms and values (Leonard-Barton, 1992). Because organizational learning is a capability allowing organizations to create knowledge as a source of improved performance (Hitt & Ireland, 2000), it is important to understand how organizations use learning in ways that transform the individual, teams, partnerships, and organizations (Franz, 2003).

2.6.4 Decision making

In all organizations, the effectiveness of a decision is the quality of the decision multiplied by the acceptance of it (Loeb, 1994) and commitment to it (Covey, 2002). Entrepreneurial organizations and individuals face a continuous stream of increasingly complex decisions. Research regarding entrepreneurial decision-making encompasses the entrepreneur (Mullins, 1996), environmental factors (Bruno & Tyebjee 1982), the strategic decision process (Frese, van Gelderen, and Ombach, 2000), and decision-specific characteristics (Papadakis, Lioukas, and Chambers, 1998). Decision-making is a multi-stage and multi-criteria process (Hall & Hofer, 1993) determined by the interplay between the expectations about the future of the decision-maker and the calculation and recalculation of risk and reward (Clark & Marshall, 2002).

A research focus on entrepreneurial cognition has explored the way entrepreneurs think and the individual decision-making processes or heuristics adopted by
entrepreneurs (Baron, 1998; Busenitz & Barney, 1997; Tversky & Kahneman, 1984; Stevenson & Gumpert, 1985). Baron (1998) suggested that because entrepreneurs face situations that involve information overload, high degree of uncertainty, intense emotion, commitment, responsibility, and other factors, their susceptibility to cognitive biases and errors is increased. Some of the literature on decision making addresses cognitive biases such as the emotional biases of anticipated regret (Savage, 1954), affect infusion (Forgas, 1995); self-efficacy (Bandura, 1986; Brockhaus, 1980); or overconfidence (Zacharakis & Shepherd, 2001).

Decision making occurs on both the individual and group levels. From the organizational perspective, there are many types of decision making processes. A management science approach is frequently used when variables can easily be identified and measured. The Carnegie model involves a coalition of managers who negotiate to make a satisfying rather than optimizing decision (Cyert & March, 1963; March & Simon, 1958). The incremental decision process model proposes a decision sequence of identification, development, and selection (Mitzberg, 1973). The garbage can model deals with patterns of multiple decisions and highly uncertain conditions (Cohen, March, and Olson, 1972).

Because there are social-psychological factors that enter into the decision process in organizations (Simon, 1978), framing the decision, specifying decision criteria, agreeing on a decision process and understanding decision authority can improve organizational decision making. All decisions are made with some level of uncertainty. Kreitner (2001) presented three types of uncertainty that could affect decision making.
attitude and performance, including state uncertainty concerning the unpredictable environment; effect uncertainty in predicting impacts of environmental change on the organization; and response uncertainty in predicting consequences of organizational decisions.

2.6.5 Organizational change

Another essential element of the entrepreneurial process, is organizational change. Dealing with organizational change is a kind of chaos (Gleik, 1987) that is an integral part of modern management (Kreitner, 2001). Because organizations can not deny or delay the changes approaching from many directions, organizations should continuously seek change to improve the organization. Change and transformation can be geared toward reengineering for efficiency (Hammer & Champy, 1993); restructuring for more immediate, tangible impacts on systems and structures; renewing to tap into entrepreneurial behavior (Ghoshal & Bartlett, 1995); and regeneration which encompasses an opportunity-driven long-term organizational commitment to continuous transformation for innovation (Tushman & Nadler, 1986).

Change can be episodic, discontinuous, and intermittent or change can be continuous, evolving, and incremental (Weick & Quinn, 1999). Change has been studied based on various areas of interest, including resistance, receptivity, and commitment to change (Kanter, 1991; Meyer & Allen, 1997; O’Toole, 1995); incremental and radical change (Bateson, 1972); first- and second-order change (Roach & Bednar 1997); and
rhythms of change (Greiner 1972). Nadler and Tushman (1990) presented a model that illustrated various types of organizational change (Table 2.2).

<table>
<thead>
<tr>
<th></th>
<th>Incremental change</th>
<th>Strategic change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anticipatory change</strong></td>
<td>Tuning</td>
<td>Re-orientation</td>
</tr>
<tr>
<td><strong>Reactive change</strong></td>
<td>Adaptation</td>
<td>Re-creation</td>
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**Table 2.2: Types of organizational change (Nadler & Tushman, 1990)**

There are a variety of theories and models for organizational change, many that reflect similarities to equilibrium models such as Lewin’s (1958) triadic model of unfreezing, moving, and freezing for successful change and Gersick’s (1991) multilevel conceptualization of change as an altering state between stability and upheaval. More dynamic models of organizational change integrate concepts such as innovations as catalysts for change and continuous learning that addresses the interaction of the organization and its environment (Greve & Taylor, 2000).

In a review of theory and research on organizational change in the 1990s, Armenakis and Bedeian (1999) summarized content, contextual, process and outcome issues in the research. Content research included models such as the diagnostic model by Burke and Litwin (1992) that distinguished between transformational and transactional factors and Vollman’s (1996) model that presented a complex matrix portraying the magnitude of the change process. A review of contextual research provided insight into the impact of internal and external factors on organizational change. Process research
included various models for change agents implementing change (Galpin, 1996; Judson, 1991; Kotter, 1995) and other models that advanced understanding of how organizational members experience change (Isabella, 1990; Jaffe, Scott, and Tobe, 1994). Damanpour’s (1991) meta analysis indicated that successful change efforts may depend more on the congruency between content, contextual and process considerations.

Individuals involved in the change process may adopt different approaches, presume distinctive roles, create their own interpretation and have various affective and behavioral reactions to change (Fridja, 1996; Lazarus, 1991). Entrepreneurial individuals are effective agents of change by being mindful of the political realities, framing ideas constructively, building a coalition and keeping it focused through implementation and evaluation. Individuals within organizations are assumed to be capable of purposeful and adaptive behavior; by themselves or in interaction with others, they are able to envision an end state and take action to reach it, while monitoring their progress along the way (Van de Ven & Poole, 1995). Successful change efforts may depend more on the congruency between content, context, and process considerations than on the nature of the intended change (Damanpour, 1991).

2.7 Entrepreneurial Orientation

Two fundamental dimensions essential to the entrepreneurial process are Entrepreneurial Orientation and Entrepreneurial Management which were explored in-depth through this study. The study of organizational entrepreneurship has led to the development of an entrepreneurial orientation construct which includes the dimensions of
organizational risk taking, proactiveness, and innovativeness (Khandwalla, 1977; Miller 1983; Miller & Friesen, 1978, 1982). The term entrepreneurial orientation has been used to refer to the strategy-making processes and styles of organizations (Lumpkin & Dess, 2001). Contributions to the evolution of entrepreneurial orientation began with Khandwalla (1977) who defined entrepreneurial orientation as a strategic choice and developed scale elements to measure organizational characteristics, including entrepreneurship. Before Khandwalla (1977), Mintzberg (1973) introduced factors such as proactiveness and risk taking. Miller and Friesen (1978, 1982) defined dimensions of entrepreneurial orientation and adapted elements from Khandwalla’s (1977) scale to measure entrepreneurship in organizations. Although the early works of Khandwalla (1977) and Miller and Friesen (1978) were not exclusively focused on entrepreneurship, they did provide some insight into the entrepreneurial orientation construct.

Miller (1983) operationalized the concept of entrepreneurial orientation by developing a scale and researching the determinants of entrepreneurship in different types of organizations. Building on the work of Miller (1983), Covin and Slevin (1986, 1989, 1989, 1991) stressed that organizations with high entrepreneurial orientation have specific reoccurring behavior patterns and they proposed internal, external, and strategic variables that had a moderating effect on the relationship between entrepreneurial orientation and organizational performance. Lumpkin and Dess (1996) made further contributions, adding the dimensions of competitive aggressiveness and autonomy, and equating the concept of entrepreneurial orientation to the organization’s key processes, practices, and decision making activities.
Knight (1997) tested the entrepreneurial orientation instrument in cross-cultural settings to determine validity, reliability, and freedom from cultural bias. A common theme in the entrepreneurial orientation literature is that researchers have agreed that entrepreneurial orientation is a dynamic organizational-level process that is applicable to any organization, regardless of its size and type (Knight, 1997). In addition to Covin and Slevin’s research (1991), studies of entrepreneurial orientation using Miller’s original or slightly modified instruments included Miles, Arnold, and Thompson (1993); Brown (1996); Knight (1997); Lumpkin and Dess (1996); Zahra (1991, 1993); Zahra and Covin (1995); Zahra and Garvis (2000). More recent work used the definitions, models and frameworks to examine the relationship between entrepreneurial orientation and other organizational characteristics, such as market orientation (Miles & Arnold, 1991; Becherer & Maurer, 1997; Slater & Narver, 1995).

2.7.1 Innovativeness

Innovativeness is a vital component of an entrepreneurial orientation because it reflects the organization’s tendency to engage in and support new ideas through experimentation and creative processes that contribute to the development of new products, services, technologies, or processes (Lumpkin & Dess, 1996). Joseph A. Schumpeter’s (1936) definition of innovation included the introduction of a new good, the introduction of a new method of production, the opening of a new market, the conquest of a new source of supply of new materials, or the carrying out of a new endeavor within any industry. Organizational innovation has been defined as a creative
idea that produces value (Hitt & Ireland, 2000); as the adoption of an idea or behavior that is new to the organization (Zammuto & O’Connor, 1992); and as a mindset that drives the organization’s activities (Kuczmarski, 1996). Through such a mindset, innovation can lead to a fundamental reconceptualization of the type of value the organization seeks to create and how to create it (Markides, 1998). Types of innovation include discontinuous breakthrough innovation, dynamically continuous innovation offering dramatic improvements, continuous incremental innovation, and imitation which mimics or adapts prior innovation (Morris & Kuratko, 2002). Organizational innovation refers to the creation or adoption of an idea or behavior new to the organization (Daft, 1978; Damanpour, 1996; Damanpour & Evans, 1984).

Because innovation is recognized as playing a critical role in the success of organizations, researchers have sought to determine the factors that determine innovation in an organizational setting (Dess et.al., 1997; Goes & Park, 1997). The particular kinds of innovation examined have shifted across time (Hage, 1999). In the 1960s and 1970s the emphasis was on incremental change in public sector organizations (Allen & Cohen, 1969). In the 1980s and 1990s it was on radical change in private sector organizations (Van de Ven, Angle, and Poole, 1989). Now, there is evidence of research focusing on inter-organizational ventures and the types of innovation, determinants of innovation and other factors influencing the rate, scope, and impacts of innovation (Hage, 1999).

Some believe that innovation will emerge as the core component of the organization’s strategy in the twenty-first century (Kuczmarski, 1996). Drucker (1985) suggested that innovation was the specific function of entrepreneurship and he identified
seven sources of organizational innovation, which included unexpected occurrences; incongruities; process needs; industry and market changes; demographic changes; changes in perception; and new knowledge. Three steps to foster innovation include making sure that existing structures and practices do not present insurmountable roadblocks to the flexibility and fast action required for innovation; providing tools and incentives for entrepreneurial projects; and developing an entrepreneurial climate that spurs new opportunities in new combinations (Kanter, 1985). Success in innovation depends on rapid learning and fast response to what has been learned (Pinchot & Pellman, 1999, p.13). A climate that fosters innovation is one where people are excited and dedicated to problem solving and producing (Peters & Waterman, 1982).

Characteristics of innovations that affect the rate of adoption of new innovations include relative advantage, compatibility, complexity, triability and observability (Rogers, 1995). Strategic innovation revolves around a portfolio versus a project approach, that leads to balancing high risk, high return projects with low risk, low return projects; discontinuous or dynamically continuous innovation with continuous innovations and imitations; projects with shorter development cycle times and payoffs with ones with longer-term outcomes; products and services intended for markets currently served by the organization with projects and services intended for markets new to the organization; projects using new and emerging technologies with those relying on familiar technologies (Morris & Kuratko, 2002). Entrepreneurial organizations have a planned approach for internal and external sourcing of new ideas for innovations that are new to the world, new to a market, new to an organization, new to a product line, or new as a product extension,
product revision, or product support. The literature on organizational innovation has been interpreted through different perspectives, including organizational design (Teece, 1998), organizational cognition (Argyis & Schon, 1996; Nonaka, 1994), and organizational change and adaptation (Burgleman, 1991). Additional research on entrepreneurship, innovativeness, and organizational performance has been published by a number of scholars, including Antoncic and Hisrich (2001); Covin and Miles (1999); Jennings and Young (1990); Knight (1997); Lumpkin and Dess (2001); Schumpter (1934); Zahra (1993); Zahra and Covin (1993); Zajac, Golden, and Shortell (1991).

2.7.2 Proactiveness

Proactiveness, as a dimension of entrepreneurship, has been defined as forward-looking assertive strategy making (Miller, 1987); the continuous search for market opportunities and experimentation with responses to changing environmental trends (Venkatraman, 1989); and a disposition to take action to influence the environment (Bateman & Crant, 1993). Proactiveness involves focusing on the future; creating an idea; assuming responsibility; anticipating and preventing problems; communicating effectively; remaining adaptable; and persevering through implementation of the new process or launch of a new product (Morris & Kuratko, 2002). While traditional organizations view information selectively and respond defensively, entrepreneurial organizations are open to new opportunities from several sources and seize opportunities by relating proactively to this information.
Entrepreneurial thinking should include some sort of propensity to take action on new opportunities (Shapero & Sokol, 1982). Kickul and Gundtry (2002) found interesting associations between proactiveness and entrepreneurial activity. Learned optimism has been associated with proactive goal-directed behavior (Seligman, 1990). Miller (1987) operationalized proactiveness through a scale that included following versus leading competitors in innovation; favoring the tried and true versus emphasizing growth, innovation, and development; trying to cooperate with competitors versus trying to undo them. Proactiveness also been explored by researches such as Antoncic and Hisrich, (2001); Knight, (1997); Lumpkin and Dess (2001); Stevenson and Jarillo (1990).

2.7.3 Risk Taking

Early definitions of entrepreneurship centered around a willingness to engage in calculated business risks (Brockhaus, 1980). Entrepreneurial risk, with the potential for both gains and losses, has been defined as decision making about new ventures, products or processes under conditions of risk and uncertainty (Cornwall & Perlman, 1990). Dickson and Giglierano (1986) discussed two types of risk. “Sinking the boat” risks are the result of factors such as poorly thought-out concepts, bad timing, an already-satisfied market, inadequate marketing and distribution approaches, and inappropriate pricing (Dickson & Giglierano, 1986). “Missing the boat” risks result from being too cautious overlooking or dismissing opportunities, not pursuing a course of action, or delaying action for so long that competitors profit or the market opportunity changes (Dickson & Giglierano, 1986).
Risk taking has been explored from both the individual and organizational perspectives. Factors investigated have included a tolerance for ambiguity (Hai & See, 1997); risk aversion due to cognitive biases such as overconfidence (Houghton, Simon, and Aquino, 2000); risk propensity due to optimism (Hayek, 1945); and information acquisition to reduce uncertainty and risks (Fiet, 1996). Additional research on risk taking perception has also been presented by Brockhaus (1980); Burgelman (1983); Sathe (1985); Kanter (1985); Quinn (1985); MacMillan, Block, and Narasimha (1986); McClelland (1961); Bird (1988); Palich and Bagby (1996).

2.8 Entrepreneurial Management

Stevenson (1983) defined entrepreneurial management as a set of opportunity-based management practices which can help organizations remain vital and contribute to organizational and societal value creation. Day (1992) defined entrepreneurial management as all management actions and decisions concerning development of innovation from new or reconfigured resources, regardless of the scope of such development efforts. Stevenson (1983) conceptualized entrepreneurship as a management approach focused on the pursuit and exploitation of opportunity without regard to resources currently controlled. Entrepreneurial management behaviors promote a culture of creativity and risk taking, create flat informal structures, and formulate strategy in order to take advantage of identified opportunities (Sadler-Smith, Hampson, Chaston, and Badger, 2003). Entrepreneurial management can be viewed from two extremes, with promoters at one end of a spectrum representing entrepreneurial behaviors
and trustees at the other, representing administrative behaviors (Stevenson & Gumpert, 1985). Stevenson (1983) categorized management behaviors of the promoter and trustee organizations along the dimensions which have evolved to represent strategic orientation and commitment to opportunity; resource orientation; management structure; reward philosophy; and entrepreneurial culture.

Consistent with the views of Covin and Slevin (1989), Stevenson (1983) characterized entrepreneurship in terms of behavior. He argued that entrepreneurial management was a set of behaviors that fostered entrepreneurial activity in the organization. Similar to Miller (1983) and Lumpkin & Dess (1996), Stevenson (1983) also emphasized the entrepreneurial process. The entrepreneurial management construct developed by Stevenson (1983) and Stevenson and Jarillo (1990) differs from the entrepreneurial orientation literature in that it emphasizes management behaviors that can be taught and key stages of the process include detecting an opportunity, pursuing an opportunity, and facilitating the development of opportunity. Brown and Davidsson (1998) began operationalizing the concepts presented by Stevenson (1983). Brown and Davidsson (1998) found that entrepreneurial orientation and the opportunity-based view presented by Stevenson (1983) were related but both captured distinct aspects of entrepreneurship.

2.8.1 Strategic Orientation

Among the management practices believed to facilitate entrepreneurial behavior are an organization’s strategic orientation and strategic management practices (Covin &
Slevin, 1991; Murray, 1984). Strategic orientation describes what factors drive the creation of strategy. For Stevenson (1983), the strategy of the promoter-oriented organization is driven by opportunities that exist in the environment and not the resources that may be required to exploit them, while the trustee-oriented organizational strategy is based on utilizing resources of the organization efficiently. Entrepreneurial promoter-oriented organizations often see opportunities where others do not, and envision future possibilities that others fail to recognize (Allinson, Chell, and Hayes, 2000; Stevenson & Gumpert, 1985).

While the fields of strategic management and entrepreneurship have developed largely independently of each other, they both are focused on how organizations adapt to environmental change and exploit opportunities created by uncertainties and discontinuities (Hitt & Ireland, 2000). Various scholars have explored the integration of strategic management and entrepreneurial perspectives (Hitt et al., 2002; McGrath & MacMillan, 2000; Meyer & Heppard, 2000).

According to Prahalad and Hamel (1994), an organization’s strategic orientation is comprised of an overall strategic intent with mission, goals, and objectives, as well as the core organizational processes, systems, and culture that facilitate achievement of the goals. Porter (1980) revealed differentiation strategies of organizations offering customers unique products or services. Differentiators are similar to Miles and Snow’s (1978) prospector-type organizations that are characterized by risk taking and a proactive external orientation. The concept of strategic orientation was also developed by Cornwall and Perlman (1990), who contrasted traditional organizations with
entrepreneurial organizations. This same theme was echoed in the work of Stevenson (1983), who elaborated on a continuum with promoter-oriented organizations that were driven by opportunities at one end and trustee-oriented organizations that were devoted to efficiently utilizing the organization’s resources on the other end. This study focused on Stevenson’s description of strategic orientation.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Strategic Orientation Continuum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burns &amp; Stalker, 1971</td>
<td>Mechanistic</td>
</tr>
<tr>
<td></td>
<td>Organic</td>
</tr>
<tr>
<td>Cornwall &amp; Perlman,</td>
<td>Traditional</td>
</tr>
<tr>
<td>1990</td>
<td>Protect status quo</td>
</tr>
<tr>
<td></td>
<td>Entrepreneurial</td>
</tr>
<tr>
<td></td>
<td>Actively seek new value</td>
</tr>
<tr>
<td>Miles &amp; Snow, 1978</td>
<td>Reactor</td>
</tr>
<tr>
<td></td>
<td>Defender</td>
</tr>
<tr>
<td></td>
<td>Analyzer</td>
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<tr>
<td></td>
<td>Prospector</td>
</tr>
<tr>
<td></td>
<td>Protect core business</td>
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<tr>
<td></td>
<td>Proactive external focus</td>
</tr>
<tr>
<td>Stevenson, 1983</td>
<td>Trustee</td>
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<tr>
<td></td>
<td>Promoter</td>
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<tr>
<td></td>
<td>Resource-driven</td>
</tr>
<tr>
<td></td>
<td>Opportunity-driven</td>
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</tbody>
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Table 2.3: Strategic Orientation continuums

Entrepreneurial organizations approach strategy by creating and facilitating more of a dynamic organic perspective, rather than accepting the more static and sequential mechanistic perspective (Farjoun, 2002). This organic perspective involves the continuous learning and aligning of goals, structure, actions, systems, processes (Chandler, 1962), policies (Selznick, 1957), and the resource mix. This goes beyond the more traditional linear mechanistic perspectives that define strategy as a posture or plan rather than a continuous process. Mechanistic perspectives include resource-based views and linear approaches linking strategy, structure, conduct, and performance (Farjoun, 2002). The organic perspective has emerged through research streams highlighting new
views of continuous strategic processes, strategic change, interactive influences, and strategy formation in a complex, interconnected, uncertain, and constantly changing environment.

2.8.2 Resource Orientation

Promoter-oriented organizations act as if all they need from resources is the ability to use them, which enables the organization to access specialization as needed, reduce the risk of expensive obsolescence and maintain flexibility. Trustee-oriented organizations seek stability and efficiency through resource ownership, which they associate with control, power and status. Promoters become skilled at the use of other people’s resources including financial, intellectual and political capital. (Starr & MacMillan, 1990).

Entrepreneurial organizations create new resources or obtain and combine existing resources in unique ways to innovate (Schumpeter, 1934). Resources can be knowledge-based or property-based (Galunic & Rodan, 1998). Knowledge-based resources can be focused in various areas such as procedural (Lesgold, 1988), market (Cohen & Levinthal, 1990; Shane, 2000; von Hippel, 1986; 1994), or technological (Abernathy & Utterback, 1978; Cohen & Levinthal, 1990; McEvily & Chakravarthy, 2002). Compared to tangible resources, intangible resources such as entrepreneurial knowledge, are more likely to contribute to a competitive advantage because they are socially complex and difficult for current and potential rivals to understand and imitate.
Entrepreneurial knowledge includes where to obtain undervalued resources and how to exploit those resources (Alvarez & Barney, 2001).

Increasingly, organizations are using alliances and networks to access markets, information, technology, and other resources (Hitt et al., 2001) that are important for innovation and the implementation of organizational entrepreneurship strategies (Kale, Singh, & Perlmutter, 2000). From a resource-based view, Barney (1991) suggested evaluating the sustainability of a resource’s advantages by determining the degree to which resources were valuable, rare, hard to imitate, and hard to substitute. Other research focused on resources has been reported by Brush, Greene, and Hart (2001); Burgelman and Sayles (1986); Damanpour (1991); Hisrich and Peters (1986); Kanter (1985); Katz and Gartner (1988); Sathe (1985); von Hippel (1988); Wernerfelt (1984).

2.8.3 Management Structure

Different types of structures are good for accomplishing particular outcomes under particular circumstances (Morris & Kuratko, 2002). The management structure and strategic position of the promoter-oriented organization is organic (Burns & Stalker, 1961), which is especially appropriate when organizations are faced with high levels of environmental change (Burgelman, 1983; Burns & Stalker, 1961; Miller, 1983). This organic management structure is flat, flexible, and made of multiple informal networks (Brown et al., 2001). The trustee-oriented organization is more mechanistic and organized as a formalized hierarchy characterized by clearly defined lines of authority.
Organizational structure can enhance entrepreneurial activity within organizations (Bird, 1988; Burgelman, 1983; Burns & Stalker, 1961; Hisrich & Peters, 1986; Sathe, 1985; Schuler, 1986; Zahra, 1993). Miller (1996) suggested that the strategy-structure linkage could be categorized into four types, including simple structure, which is highly informal and works well in small, rapid-growth ventures; machine bureaucracy, which focuses on standardization and works well in achieving production efficiencies in predictable environments; organic, which is flexible, collaborative, and accommodating to innovation; and divisional, which operates with formal independent teams and sophisticated management information systems.

Organizational theory has long held that external change leads to internal adjustments in structure, strategy, and operational methods (Lawrence & Lorsch, 1967). Other research on organizational structure and organizational entrepreneurship has been published by Guth and Ginsberg (1990); Jennings (1994); Zahra (1991, 1993). Mechanistic and organic forms are polar types at the opposite end of a continuum and, in some organizations, a mixture of both types can be found (Burns & Stalker, 1961).

2.8.4 Reward Philosophy

Entrepreneurship is about risk and reward (Morris & Kuratko, 2002). Entrepreneurially managed organizations tend to base compensation on how individuals contribute to value creation, rather than solely rewarding seniority. Compensation can be grouped into categories such as indirect pay in the form of benefits and services; direct pay, including base pay, merit pay and incentives; relational forms through recognition,

Compensation can have a powerful effect on outcomes resulting from individual and team efforts, and ultimately, on organizational performance (Becker & Gerhart, 1996; Lepak & Snell, 1999 Research findings confirm a relationship among strategies, compensation, and performance (Miles & Snow, 1978). Reward systems in public agencies and higher education present structured and often inflexible situations that support a more mechanistic organization, but public and nonprofit organizations are beginning to explore degrees of flexibility (Miller, 2005; Morris & Kuratko, 2002). The type of compensation system, linked with strategy, has a greater effect on firm performance than does the amount of compensation (Kuratko, Ireland, and Hornsby, 2001).

2.8.5 Entrepreneurial Culture

Researchers claim that organizational culture plays a key role in organizational entrepreneurship (Bygrave, 1997; Cornwall & Perlman, 1990; Hood & Young 1993; Morris, 1998; Peters, 1997; Timmons, 1999). Although over 150 definitions of culture have been identified (Kroeber & Kluckhohn, 1952), two primary approaches address
culture either through a functional approach that emerges from collective behavior or through a semiotic approach, with culture residing in individual interpretations and cognitions. Culture, a concept borrowed originally from the fields of sociology and anthropology, can be defined as an organization’s basic beliefs and assumptions about what the organization is about, how its members should behave, and how it defines itself in relation to its external environment (Cornwall & Perlman, 1990). Culture consists of substance such as shared systems of values, beliefs, and norms as well as forms, such as vocabulary, myths, rituals, ways of dressing, and office décor (Trice & Beyer, 1993).

Hofstede (1991) provided a framework with five dimensions used to differentiate between cultures, including power distance which is the degree of perceived inequality among people; individualism which is the degree people prefer to act as individuals or a member of a group; masculinity which is the degree in which traditionally masculine values such as assertiveness and competition are emphasized over traditionally feminine values such as relationships and service; uncertainty avoidance which is the degree to which people prefer structured situations; and long-term orientation. Cameron and Ettington (1988) found more than twenty dimensions of organizational culture, such as internal-external focus, clarity, and speed. Components of an entrepreneurial culture include value creation through innovation and change; a focus on people and empowerment; hands-on management; freedom to grow and fail; commitment and personal responsibility; emphasis on the future and a sense of urgency (Cornwall & Perlman, 1990; Timmons, 1999).
In various studies (Berrio, 2003; Cameron, 1997; Quinn & Rohrbaugh, 1981), organizational culture has been measured through a Competing Values Framework intended to profile the dominant culture within the four quadrants of clan (Ouchi, 1981), adhocracy (Mintzberg, 1973), market (Williamson, 1975), and hierarchy (Weber, 1947). Deal and Kennedy (2000) argued that distinct types of cultures evolve within organizations and these types have a direct and measurable impact on strategy and performance.

Although there are distinctions between the meanings of organizational culture and organizational climate, Extension organizations can learn from both because the terms have frequently been used interchangeably in the literature. The concept of climate has its roots in the work of Lewin (1951); Likert (1961, 1967); Tagiuri & Litwin, (1968). Various perspectives have presented climate as either a shared perception or as a shared set of conditions. Other climate researchers have explored the formation of climate through a social construction approach (Ashforth, 1985; Poole & McPhee, 1983). In various studies, climate has been studied through models such as Gibb’s (1961) defensive and supportive climate model. While culture refers more to the deep rooted, slow to change values held by organizational members, climate tends to portray social environments as a set of more temporary perceptions and dimensions (Denison, 1990; Schneider, 1990).

Organizational culture and climate have also been linked to corporate character (Wilkins, 1989) which focuses more on an external reputation than on the internally focused dimensions of culture. A scale to assess corporate character through employee
and customer views was developed by Davies, Chun, da Silva, and Roper (2004). The scale addressed dimensions labeled agreeable, enterprising, competent, chic, ruthless, informality, and machismo.

Effective organizational entrepreneurship involves managing a culture which includes all personnel as self-perceived intrapreneurs, applauds failures as well as successes, integrates screening mechanisms to foster innovation, and nurtures frequent communication among people with dissimilar views (Van de Ven, 1989). According to Stephenson and Jarillo (1990) a promoter-oriented organization with an entrepreneurial culture, encourages ideas, experimentation, and creativity. Creating an entrepreneurial culture is not simply a matter of emphasizing certain values, it also involves choosing between conflicting values that coexist in an organization (Morris & Kuratko, 2002). Entrepreneurial organizations achieve a balance on a continuum of primary values, such as performance-based rewards versus power and tenure-based rewards; personal purpose and organizational purpose; command decision making and consensus decision making (Tropman & Morningstar, 1989).

2.9 Organizational Performance

Understanding and improving performance is a central aim of entrepreneurship research (Covin & Slevin, 1991; Murphy, Trailer, and Hill, 1996). Researchers suggest that organizational-level entrepreneurship leads to improved performance (Brown, 1996; Naman & Slevin, 1993; Zahra, 1986; Zahra & Covin, 1995). Studies have included both objective measures which are obtained from organizational records (Seashore &
Yuchtman, 1967) and subjective measures which are perceptions collected from organizational members and stakeholders (Campbell, 1977). Rigorous empirical research examining the link between entrepreneurship and performance is still limited (Covin & Slevin, 1991; Zahra & Covin, 1993). Recognizing the multidimensional nature of the performance construct, Lumpkin and Dess (1996) recommended using multiple performance measures, such as financial indicators, satisfaction with overall performance, and stakeholder support (Voss, Voss & Moorman, 2004). The immense debate on what measures are preferable when measuring performance has revolved around the use of financial or non-financial indicators (Hayes & Abernathy, 1980; Johnson & Kaplan, 1987).

In addition to financial indicators, the literature has mentioned several possible non-financial outcomes to evaluate the potential influence of entrepreneurship on organizational performance (Bromwich & Bhimani, 1994; Zahra, 1993). Some of the very best managerial actions and innovations do not yield measurable financial performance but they define the organization and give meaning to its different activities (Kanter, 1989). Possible non-financial outcomes include keeping the organizations’ most talented people (Peters & Waterman, 1982); creating value for a variety of stakeholders (Graves & Waddock, 1994; McGrath, Venaktraman, and MacMillan, 1992; Ogden & Watson, 1999; Ruf, Muralidhar, Brown, Janney, and Paul, 2001) process innovations (Wiklund & Shepherd, 2003); gathering and using knowledge (Lumpkin & Lichtenstein, 2005); and managing change (Hage, 1999). An organizational performance construct was operationalized by Jawaorski and Kohli (1993) with two judgmental questions. In
their study, respondents were asked for their opinion of the previous year’s overall performance of their organization and their overall performance relative to leading competitors.

The concepts of performance and effectiveness have been central to organizational and management theory (Boyne, 2003; Rainey, 1997). Organizational performance is a complex and multidimensional phenomenon which can be difficult to operationalize (Dess & Robinson, 1984; Ford & Schellenberg, 1982). Performance evaluation practices involve a number of performance measures used to systematically measure the performance of the organization in order to maintain or alter organizational activities (Simmons, 2000).

The goal approach focuses on output and explicit goal-based behaviors (Eztoni, 1964). The systems resource approach provides a framework based on how effectively an organization obtains resources needed for high performance and survival (Yuchtman & Seashore, 1967). The internal process approach addresses efficient use of resources and harmonious internal functioning. The constituency or stakeholder approach focuses on benefiting numerous internal and external constituencies (Thompson, 1967). The competing values approach integrates diverse concepts of effectiveness.

2.10 Summary of Literature Review

Research indicates that entrepreneurial activities within organizations are not limited to size or age of the organization (Chittipeddi & Walle, 1991), nor confined to particular industry sectors (Morris & Jones, 1999). The construct of entrepreneurship and performance can be complex and multidimensional, especially as scholars continue to
debate such fundamental issues as the definition of entrepreneurship and the evidence of performance. The core of entrepreneurship, both individual and organizational, is this pursuit of opportunity (Stevenson & Jarillo, 1990). One way of viewing entrepreneurship is through the emerging consensus in the field that the boundaries of entrepreneurship embrace an incremental innovation process (Pavitt, 1991) which eventually triggers an entrepreneurial event (Bygrave, 1989; Bygrave & Hofer, 1991) or a meaningful change and substantive redefinition or discovery of value or application.

The efforts to further develop the concept of entrepreneurship are growing as is evidenced by the proliferation of journals, professional associations, conferences, and academic appointments (Kuratko, 2003). From the global perspective, several models have been developed to create insight into entrepreneurial activity which varies across countries and over time (Blanchflower, 2000; De Wit & van Winden, 1989). Emerging theory and practice can guide individuals, teams, organizations, and communities as they operate with unique characteristics and needs in an environment influenced by a rapid pace of change, complexity, chaos, and contradiction (Hitt & Reed, 2000). This study focused on organizational entrepreneurship theory and application from the perspective of Cooperative Extension leadership and provides an opportunity to further explore and expand entrepreneurship throughout the Extension organization to improve organizational performance. The framework developed through this literature review provides a solid research-based foundation for this study.
CHAPTER 3

PROCEDURES

The goal of this study was to analyze the relationship between organizational entrepreneurship and organizational performance in the Cooperative Extension System. Authorization for this study was approved by The Ohio State University Human Subjects Review Committee (Appendix D). This chapter outlines the process for systematically designing, collecting, and analyzing the research data to increase understanding about the organizational entrepreneurship and organizational performance relationship. Sections include:

3.1 Research design
3.2 Population and sampling
3.3 Instrumentation
3.4 Data collection
3.5 Data analysis
Consistent with most survey-based entrepreneurship research, the state Directors, as the Chief Executive Officer (CEO), were placed in the role of key informant to minimize biases associated with hierarchical levels (Glick, Huber, Miller, Doty, and Sutcliffe, 1990) and the perceptual agreement problem (James, 1982). Senior leaders typically provide a reasonably accurate picture of the organization’s conditions (Chandler & Hanks, 1993).

3.1 Research Design

This study was classified as non-experimental quantitative research. This study did not seek to demonstrate causality, but explored the extent to which organizational entrepreneurship was associated with organizational performance within the Cooperative Extension System.

3.2 Population and Sampling

The most senior managers of the Extension organizations were targeted for data collection because CEOs are typically the most knowledgeable persons regarding their organizations’ strategies and overall business situations (Hambrick, 1982). The population frame used for this study was drawn from a data set of Extension Directors in four geographical regions (Appendix C). This data set was available through NASULGC and contained 54 Extension organizations at NASULGC-member land-grant institutions established through the Morrill Act of 1862. The 1862 organizations were selected because of their long history and similarities in funding compared to 1890 institutions.
and 1994 tribal institutions which have different funding structures and opportunities. With this purposive targeted population, limitations included the inability to infer to a larger population (Bracht & Glass, 1968; Campbell & Stanley, 1963).

Extension Directors are appointed by the Land Grant College or University and the Secretary of Agriculture or designee. The Cooperative Extension System (CES) Directors are responsible for the administration and delivery of the university Cooperative Extension program and the management of the federal funds allocated to the university to carry out the programs. The Directors are also responsible for the employment of highly qualified Cooperative Extension educators who make significant program impacts. The USDA CSREES Directory of State Extension System Directors and Administrators lists the upper management of the state Extension System in the United States and territories. The 54 State Directors represent the CES in four geographic regions: Northeast Region, North Central Region, Southern Region, and Western Region. For populations of one hundred or less, Leedy and Ormond (2001) suggested surveying the entire population.

### 3.3 Instrumentation

Data was gathered through a single informant survey (Appendix A). There are a number of advantages to using only a single informant (Lyons, Lumpkin, and Dess, 2000). Glick et al. (1990) noted there was a high likelihood that the CEO was the most knowledgeable individual in the organization to provide the information. Entrepreneurship studies have often used self-reports to gather performance data and they have been shown to be reliable (Schulze, Lubatkin, Dino, and Buchholz, 2001).
3.3.1 Independent variable: Organizational Entrepreneurship

The first part of the questionnaire was an organizational-level scale for Organizational Entrepreneurship which included both the extensively used measure of Entrepreneurial Orientation, as well as a scale for Entrepreneurial Management, which was based on a modified instrument developed by Brown et al. (2001) that operationalized Stevenson’s (1983) conceptualization of entrepreneurship. The independent variable Organizational Entrepreneurship measured Entrepreneurial Orientation (Covin & Slevin, 1989), which included three sub-dimensions and Entrepreneurial Management (Brown et al., 2001), which included five sub-dimensions. The Entrepreneurial Orientation scale was designed to explore distinct dimensions of innovativeness, proactiveness, and risk taking (Figure 3.1). The scale used in this study has evolved through extensive theoretical work and has proven to serve as a reliable firm-level analysis of Entrepreneurial Orientation (Kreiser, Marino, and Weaver, 2002). The Entrepreneurial Management scale was designed to explore distinct dimensions of strategic orientation, resource orientation, management structure, reward philosophy, and entrepreneurial culture (Figure 3.1). Both scales have also been used as summed indexes. These two prominent scales have been analyzed with various samples, differing in organization size, governance, and industry sector. The items were measured through a forced choice, eight-point opposite statement interval level scale. The questions were arranged in order to avoid response set contamination.
Figure 3.1: Indicators of Organizational Entrepreneurship
3.3.2 Dependent variable: Organizational Performance

The second part of the questionnaire focused on Organizational Performance. Performance is multidimensional in nature and it is advantageous to integrate different dimensions of performance in empirical studies (Cameron, 1978; Lumpkin & Dess, 1996). For this study, the performance construct was explored through both financial and non-financial dimensions (Figure 3.2).

**Figure 3.2: Indicators of Organizational Performance**
Identifying the rate of revenue change permits an assessment of the economic success of the organization (Sexton & Smilor, 1997). Appropriated funding and non-appropriated revenue for the past five years provided information to determine a revenue trend scale focused on change in total funding and change in percentage of non-appropriated funding over five years. Non-appropriated revenue was defined by ECOP’s Personnel and Organizational Development Committee (PODC) as monies that were not appropriated directly to Cooperative Extension or research units by federal, state, and local governments. There is a distinction between sources of monies and methods to transfer monies. Sources of non-appropriated funding include non-Smith Lever federal dollars, non-appropriated funds from state and local governments, monies from private foundations, associations, other organizations and individuals. Methods include grants, contracts, gifts and donations, royalties, user fees, direct sales and other revenue generating opportunities. If it was not convenient for Extension Directors to report the financial information portion of the questionnaire, they were given the option to include the name and contact information for the individual in their organization who could provide financial information. These individuals were then contacted with a request for 2000 and 2004 appropriated and non-appropriated funding.

In the Performance Satisfaction section of the questionnaire, Extension Directors were asked to rate six items on a Likert-type scale, with 1 representing unsatisfactory and 6 representing fully satisfactory. The level of satisfaction with overall Organizational Performance was indicated through six items focused on overall performance; retaining key employees; delivering new programs, products, or services for external audiences;
improving internal processes; gathering and using knowledge; and managing change.

Subjective performance measures, used in prior entrepreneurial organization research, have been shown to be correlated to objective measures of performance (Dess & Robinson 1984).

Because Extension organizations throughout the United States focus on a variety of specialized programs, overall organizational performance satisfaction was based on outputs and impacts. Outputs are the number of service units provided through activities such as the number of client contact hours, the number of publications delivered, or the number of participants and presentations. Impacts are the observed outcomes evident in short-term learning, medium term actions and long-term conditions (Chinman, Imm, and Wandersman, 2004; Taylor-Powell, 2002). The overall performance dimension as a non-financial indicator of performance is linked to the rational goal model of organizational effectiveness (Etzioni, 1964; Maynard-Moody & McClintock, 1987).

Key employee retention is the ability of Extension to keep the organization’s best and most talented people. Research shows that purposeful talent management is a critical source of competitive advantage and improved performance (Ramlall, 2004; Thompsen, 2002). When an organization loses a critical employee, it is costly (Fitz-enz, 1997; Hale, 1998), and there is negative impact on innovation, a decline in service, an adverse affect on the satisfaction of internal and external customers, and negative consequences in the profitability of the organization (Abbasi & Hollman, 2000). Where it was once common for faculty to be hired exclusively for Extension work, now universities are hiring faculty with split appointments and expectations of Extension, research, and teaching.
Requirements for these positions require increasing formal university education, certifications, accountability, and performance standards.

Within the performance satisfaction index, delivering quality products and services for external audiences included new programs, new delivery methods and reaching new people. As populations have shifted in various states, Extension organizations have had to maintain customer-focused performance, and in some instances compete with the private market, to extend the reach of programming to larger and more diverse audiences.

Improving internal processes included new operational structures or new methods to process financial transactions, enhance communications, or create efficiencies in workflow. Internal process performance is especially important as new technologies enable organizations to use resources in ways that add value for internal and external stakeholders. This dimension as a non-financial indicator of performance is closely associated to the internal process model of organizational effectiveness (Spray, 1976).

Gathering and using knowledge included market research, new advisory groups, trend reports, or other approaches that provide Extension personnel with timely and quality information for decision making. Knowledge is context-bound and can be characterized by information which ranges from precise to speculative (Barnard, 1938). Information should be easily accessible throughout the organization. The decisions made based on the information are influenced by attitude and capacity to interpret information in order to make it meaningful and useful (Beijerse, 2000). Knowledge can be implicit, which is personal and includes creative ideas or explicit which is linked to systems and
consists of information which can easily be reproduced, transferred and spread (Nonaka & Takeuchi, 1997). The knowledge cycle consists of determining the knowledge necessary; examining the knowledge available; interpreting and developing knowledge; sharing and applying knowledge; and evaluating knowledge (Weggeman, 1997).

Personnel throughout the Extension organization enhance organizational performance by being attentive to external changes and leading internal changes in structure, strategy, and operational methods. Changes are evident in all sectors of the economy and organizations must mobilize to search for them, seize them as they emerge, and use them to create new value for stakeholders (Harari, 1998, p.42). Changes in and around Extension are evolving at a rapid pace and coming from many directions, including changes in higher education; changes in the funding mix; changes in personnel requirements, responsibilities, and expectations; changes in competition from other information sources and educational providers; changes in customers and their needs and expectations; changes in organizational partners and accountability obligations. The body of literature on organizational response to discontinuously changing environments is expanding rapidly (Romanelli & Tushman, 1994), and various scholars have presented research on the change process (Galpin, 1996; Judson, 1991; Kotter, 1995; Lewin, 1947, 1958).

3.3.3 Other covariates

Other covariates were explored to mitigate any potential false interpretations of the findings. Other variable data used in this study included state population change.
between the years 2000 and 2004 and respondent’s length of service as an Extension Director (tenure), which was included as part of the questionnaire.

3.3.4 Instrument validity and reliability

The approach to measuring Organizational Entrepreneurship and non-financial indicators of Organizational Performance was the use of an instrument for capturing senior level managerial perceptions. There are advantages and disadvantages to an approach based on managerial perceptions. Advantages include practicality of convenience and interpretability, as well as validity advantages because perceptions typically provide the most precise assessments of conditions within an organization (Lyons, Lumpkin, and Dess, 2000). Disadvantages include measures of perception may lack internal consistency due to functional bias which can impact reliability.

To establish reliability and validity, the questionnaire was first reviewed by a panel of experts and pilot tested with a convenience sample of national and regional organizational leaders in Extension (Appendix B). The Cronbah’s alpha was used as part of the analysis because it has been a common method for assessing the measure of reliability of entrepreneurship in organizations (Knight, 1997). According to Nunnally (1978), alpha levels above 0.70 are typically considered acceptable for the purpose of organizational research. The alpha levels in this study were acceptable.
<table>
<thead>
<tr>
<th>Dimension</th>
<th>N</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovativeness</td>
<td>38</td>
<td>.664</td>
</tr>
<tr>
<td>Proactiveness</td>
<td>38</td>
<td>.661</td>
</tr>
<tr>
<td>Risk Taking</td>
<td>38</td>
<td>.793</td>
</tr>
<tr>
<td><strong>Entrepreneurial Orientation</strong></td>
<td>38</td>
<td><strong>.821</strong></td>
</tr>
<tr>
<td>Strategic Orientation</td>
<td>38</td>
<td>.851</td>
</tr>
<tr>
<td>Resource Orientation</td>
<td>38</td>
<td>.624</td>
</tr>
<tr>
<td>Management Structure</td>
<td>38</td>
<td>.846</td>
</tr>
<tr>
<td>Reward Philosophy</td>
<td>38</td>
<td>.714</td>
</tr>
<tr>
<td>Entrepreneurial Culture</td>
<td>38</td>
<td>.845</td>
</tr>
<tr>
<td><strong>Entrepreneurial Management</strong></td>
<td>38</td>
<td><strong>.832</strong></td>
</tr>
<tr>
<td>Organizational Entrepreneurship</td>
<td>38</td>
<td><strong>.882</strong></td>
</tr>
<tr>
<td>Performance Satisfaction</td>
<td>38</td>
<td><strong>.775</strong></td>
</tr>
</tbody>
</table>

**Table 3.1: Cronbach’s alpha for the dimensions of Organizational Entrepreneurship and Performance Satisfaction**

The Entrepreneurial Orientation scale has been slightly modified several times and consistently scored high on validity and reliability in numerous research settings (Barringer & Bluedorn, 1999; Becherer & Maurer, 1997; Covin & Slevin, 1989; Khandwalla, 1977; Knight, 1997; Kreiser et al., 2002). Brown et al. (2001), confirmed validity and reliability of the Entrepreneurial Management instrument.

To further check reliability, Extension Directors were asked to provide contact information for their direct supervisor, who served as their Vice President, Dean, or other leader who could provide perspective on their Extension organization. Analysis for this study included a comparison of these two related groups of responding directors and supervisors, representing all 4 Extension regions. In addition, analysis explored the two
independent groups of respondents and non-respondents, to see if there was a different pattern between respondents and non-respondents with regard to census data.

3.4 Data Collection

The questionnaire was developed based on the Tailored Designed Method (TDM) consisting of five elements which individually have been shown to significantly improve response to mail surveys (Dillman, 2000). These elements include a respondent-friendly questionnaire, up to five carefully timed contacts with the questionnaire recipient, inclusion of stamped return envelope, personalized correspondence, and an offer to send an executive summary of findings as a token incentive (Dillman, 2000). Tailored Design is a set of procedures for conducting successful self-administered surveys that produce both high quality information and high response rates (Dillman, 2000, p. 29).

For this study, the target population was initially contacted through email to introduce the study. One week after this email, a package, with a personalized letter, a printed questionnaire, and a stamped return envelope, was mailed to the target population. One week later, non-respondents were sent an email with a second invitation to participate and a link to a web-based version of the questionnaire. A second email was sent to non-respondents the following week. After two weeks with the web-based option, non-respondents were sent a fax reminder with response options. As a final contact, non-respondents were contacted through a telephone call to request their participation in this study. All respondents were mailed a summary of the study (Figure 3.3).
### 2005 Schedule of Contacts (May – June, 2005)

(Panel Review & Pilot Study – April, 2005)

<table>
<thead>
<tr>
<th>Contact 1</th>
<th>May 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Sent email introducing the project.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact 2</th>
<th>May 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 – Mailed letter and printed survey with the option to respond via the mail with an enclosed mailing label or via web-based survey</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact 3</th>
<th>May 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 – Response: Thank-you and follow-up</td>
<td></td>
</tr>
<tr>
<td>3 – Non-response: Email reminder with link to web-based survey</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact 4</th>
<th>May 23</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 – Response: Thank-you and follow-up contacts</td>
<td></td>
</tr>
<tr>
<td>4 – Non-response: Email reminder with response options</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact 5</th>
<th>June 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 – Response: Thank-you and follow-up contacts</td>
<td></td>
</tr>
<tr>
<td>5 – Non-response: Fax reminder/response options</td>
<td></td>
</tr>
</tbody>
</table>

**Follow-up**

Response: Thank-you and follow-up contacts

All respondents receive an executive summary of findings

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**Figure 3.3: Schedule of contacts**
3.5 Data Analysis

Data was entered and analyzed through multiple regression and other descriptive statistics, using SPSS 13.0, a statistical software program commonly used for analyzing research data (Norusis, 2004). Regression analysis is the most widely used and versatile dependence technique, applicable in every facet of business decision making (Hair, Anderson, Tatham, and Black, 1998). The researcher was interested in explaining variance by regressing the dimensions of Organizational Performance on the dimensions of Organizational Entrepreneurship.

The objective of multiple regression for this study was explanation of the extent to which Organizational Entrepreneurship was related to Organizational Performance. The independent variable, Organizational Entrepreneurship consisted of three sub-dimensions within Entrepreneurial Orientation including innovativeness, proactiveness, and risk taking and five sub-dimensions within Entrepreneurial Management, including strategic orientation, resource orientation, management structure, reward philosophy, and entrepreneurial culture. Data from the questionnaire was recoded as needed for consistent reporting of 1 as an indication of a less entrepreneurial organization and 8 as an indication of a more entrepreneurial organization. The dependent variable, Organizational Performance, consisted of two financial revenue trend indicators, including the percentage change in total funding for the past five years (2000-2004) and the percentage change in non-appropriated revenue as a percentage of the total funding change, for the past five years. These two trend indicators were calculated based on funding data from the year 2000 and the year 2004. The dependent variable,
Organizational Performance, also consisted of a non-financial Performance Satisfaction index based on 6 items related to overall performance; retaining key employees; delivering new programs, products, or services for external audiences; improving internal processes; managing knowledge; and dealing with change.

Analysis included screening data for potential errors, assessing the variables for meeting the assumptions of regression, exploring potential moderating factors, examining collinearity statistics and residuals, and considering non-response bias. Results were reported in statistical summaries and in aggregate by region so that information about individual organizations could not be identified. Using Davis (1971) as a guide, the absolute value of numbers was described with low |.10 to .29|, moderate| 30 to .49|, substantial |.50 to .69|, and very high |.70 to .99|. 
CHAPTER 4

FINDINGS

This study explored the relationship between Organizational Entrepreneurship and Organizational Performance within the Cooperative Extension System (CES), as perceived and reported by state Extension Directors. The data were from a census of Extension Directors at NASULGC-member land-grant institutions established through the Morrill Act of 1862. This chapter begins with a description of respondents and then is organized into an additional sections, each representing findings from data analysis based on the objectives of this study.

4.1 A description of respondents and non-respondents

4.2 The extent to which organizational-level entrepreneurship was evident in Extension

4.3 The financial and non-financial dimensions of Organizational Performance in Extension

4.4 The relationship between Organizational Entrepreneurship and Organizational Performance in Extension

4.5 Summary of findings
4.1 Respondents and non-respondents

4.1.1 Respondents

Extension Directors participated through various response options, including printed and mailed questionnaires (58%) online web-based questionnaires (34%), and faxed questionnaires (8%). Results for this study were aggregated by categories, based on regional assignments of the NASULGC member land-grant institutions (1862) Cooperative Extension system Regions (Appendix C). The overall response rate was 70% (n=38), with each region represented by a fairly equal number of respondents (Figure 4.1). Descriptive statistics provided data on central tendency and variability for all variables.

Figure 4.1: Respondents by region
Respondents: Tenure

While this study focused on organizational characteristics, versus individual characteristics, tenure of the sole respondent was included as a potential covariate. The number of years that respondents have served as an Extension Director (tenure) ranged from a minimum of 1 year to a maximum of 16 years. Tenure by region varied from a mean of 3.9 (S.D. 1.77) in Region 3 to 7.2 (S.D. 4.99) in Region 1.

<table>
<thead>
<tr>
<th>Region</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Western</td>
<td>9</td>
<td>1.0</td>
<td>16.0</td>
<td>7.2</td>
<td>4.99</td>
</tr>
<tr>
<td>2: N. Central</td>
<td>10</td>
<td>1.0</td>
<td>12.0</td>
<td>4.8</td>
<td>4.26</td>
</tr>
<tr>
<td>3: Southern</td>
<td>10</td>
<td>1.0</td>
<td>7.0</td>
<td>3.9</td>
<td>1.77</td>
</tr>
<tr>
<td>4: Northeast</td>
<td>9</td>
<td>1.0</td>
<td>12.0</td>
<td>5.6</td>
<td>3.82</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>1.0</td>
<td>16.0</td>
<td>5.3</td>
<td>3.90</td>
</tr>
</tbody>
</table>

*Table 4.1: Respondent tenure by region (number of years as an Extension director)*

Respondents: State population change

Directors represented Cooperative Extension Systems (CES) in 38 different states with a wide range of percent population change during 2000-2004, beginning with a minimum percent change of -1.2 and a maximum of 16.8. This five year time span was used because the financial measure for Organizational Performance was based on a 5-year funding trend, calculated by using 2000 and 2004 financial data provided by respondents. Because the CES serves the public good, state population change data was explored as a potential covariate in this study. Region 1 had the highest mean and the greatest standard deviation in percent change in state population (Table 4.2).
Respondents: A comparison of Extension Directors and their supervisors

Some response error is inherent in all social science research (Kerlinger, 1986). Because Extension Directors were used as the sole respondent for this study, Extension Directors were asked to provide contact information for their direct supervisor, who served as their Vice President, Dean, or other leader who could provide perspective on their Extension organization. While only 24 percent of the responding Directors provided the name of someone who then completed the survey, the data represented all 4 Extension regions. A review of the overall means indicated similar responses from directors and their supervisors (Table 4.3).
### Table 4.3: Director and Supervisor responses

<table>
<thead>
<tr>
<th>Organization</th>
<th>Entrepreneurial Orientation</th>
<th>Entrepreneurial Management</th>
<th>Organizational Entrepreneurship</th>
<th>Performance Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6.0</td>
<td>4.7</td>
<td>4.4</td>
<td>4.4</td>
</tr>
<tr>
<td>2</td>
<td>5.7</td>
<td>6.1</td>
<td>4.1</td>
<td>4.5</td>
</tr>
<tr>
<td>3</td>
<td>5.9</td>
<td>5.0</td>
<td>3.7</td>
<td>3.8</td>
</tr>
<tr>
<td>4</td>
<td>5.7</td>
<td>5.1</td>
<td>3.5</td>
<td>3.6</td>
</tr>
<tr>
<td>5</td>
<td>6.1</td>
<td>6.7</td>
<td>3.5</td>
<td>4.4</td>
</tr>
<tr>
<td>6</td>
<td>6.0</td>
<td>5.9</td>
<td>4.2</td>
<td>3.7</td>
</tr>
<tr>
<td>7</td>
<td>5.3</td>
<td>5.6</td>
<td>3.9</td>
<td>3.3</td>
</tr>
<tr>
<td>8</td>
<td>6.4</td>
<td>5.4</td>
<td>5.9</td>
<td>3.3</td>
</tr>
<tr>
<td>9</td>
<td>7.0</td>
<td>5.4</td>
<td>4.7</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td><strong>6.0</strong></td>
<td><strong>5.6</strong></td>
<td><strong>4.2</strong></td>
<td><strong>4.0</strong></td>
</tr>
</tbody>
</table>

#### 4.1.2 Non-respondents

While there were a fairly equal number of respondents by region, the non-response rate was moderate in Region 1 and low in the other regions. Non-response included questionnaires with incomplete information and organizations with open positions or new personnel.

### Table 4.4: Non-respondents by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Population</th>
<th>Respondents</th>
<th>Non-Respondents</th>
<th>Response Rate</th>
<th>Non-Resp. Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Western</td>
<td>16</td>
<td>9</td>
<td>7</td>
<td>.56</td>
<td>.44</td>
</tr>
<tr>
<td>2: N. Central</td>
<td>12</td>
<td>10</td>
<td>2</td>
<td>.83</td>
<td>.17</td>
</tr>
<tr>
<td>3: Southern</td>
<td>15</td>
<td>10</td>
<td>5</td>
<td>.67</td>
<td>.23</td>
</tr>
<tr>
<td>4: Northeast</td>
<td>11</td>
<td>9</td>
<td>2</td>
<td>.82</td>
<td>.18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
<td><strong>38</strong></td>
<td><strong>16</strong></td>
<td><strong>.70</strong></td>
<td><strong>.30</strong></td>
</tr>
</tbody>
</table>
4.2 Organizational Entrepreneurship

To describe the extent to which Organizational Entrepreneurship was evident in Extension, the following descriptive statistics were reported for the total population, as well as by regional categories. All items were measured through a forced choice, eight-point opposite statement interval level scale. Extension Directors were asked to respond as candidly as possible by circling a number between 1 and 8 on the opposite statement scale that best represented their organization as it was during the past five years. The questions were arranged in order to avoid response set contamination. Data was then recoded in SPSS 13.0, as needed, so that 1 indicted less entrepreneurial and 8 indicated more entrepreneurial, based on each dimension.

4.2.1 Entrepreneurial Orientation

The first seven items focused on the 3 sub-dimensions of Entrepreneurial Orientation, using a scale developed by Covin and Slevin (1989). All regions reported substantial means for the measure of Entrepreneurial Orientation, with a overall mean of 5.5 (S.D. .92) (Figure 4.3).
Within the Entrepreneurial Orientation scale, descriptive statistics revealed that responses to each of the sub-dimensions had a mean above 5 on the scale of 1-8.

**Table 4.5: Sub-dimensions of Entrepreneurial Orientation in Extension**

<table>
<thead>
<tr>
<th>Sub-dimension</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovativeness</td>
<td>38</td>
<td>3.0</td>
<td>7.5</td>
<td>5.6</td>
<td>1.19</td>
</tr>
<tr>
<td>Proactiveness</td>
<td>38</td>
<td>2.5</td>
<td>7.5</td>
<td>5.6</td>
<td>1.17</td>
</tr>
<tr>
<td>Risk Taking</td>
<td>38</td>
<td>2.7</td>
<td>7.3</td>
<td>5.4</td>
<td>1.07</td>
</tr>
<tr>
<td>Overall</td>
<td>38</td>
<td></td>
<td></td>
<td>5.5</td>
<td>.92</td>
</tr>
</tbody>
</table>

**Figure: 4.2: Entrepreneurial Orientation in Extension by region**

The mean entrepreneurial orientation scores for each region are as follows:
- **Western**: M = 5.4 (S.D. .87)
- **North Central**: M = 5.8  (S.D. .84)
- **Southern**: M = 5.8 (S.D. .88)
- **Northeast**: M = 5.1 (S.D. 1.07)
4.2.2 Entrepreneurial Management

In order to get a more complete assessment of Organizational Entrepreneurship, this study also explored Entrepreneurial Management, in addition to the extensively used Entrepreneurial Orientation construct. The Entrepreneurial Management scale consisted of eighteen items within 5 sub-dimensions. This scale was developed by Brown et al. (2001) to operationalize Stevenson’s (1983) conceptualization of entrepreneurship as a set of opportunity-based management practices. All regions reported means above 5.0 on a scale of 1-8 for the measure of Entrepreneurial Management, with an overall mean of 5.25 (S.D. .74).

![Entrepreneurial Management in Extension by region](image)

**Figure 4.3: Entrepreneurial Management in Extension by region**
Within the Entrepreneurial Management scale, descriptive statistics revealed responses to each of the sub-dimensions, with entrepreneurial culture having the highest mean and reward philosophy and management structure having the lowest mean.

<table>
<thead>
<tr>
<th>Sub-dimension</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Orientation</td>
<td>38</td>
<td>1.7</td>
<td>7.0</td>
<td>5.1</td>
<td>1.25</td>
</tr>
<tr>
<td>Resource Orientation</td>
<td>38</td>
<td>2.3</td>
<td>7.0</td>
<td>5.2</td>
<td>1.04</td>
</tr>
<tr>
<td>Management Structure</td>
<td>38</td>
<td>1.8</td>
<td>6.6</td>
<td>5.0</td>
<td>1.12</td>
</tr>
<tr>
<td>Reward Philosophy</td>
<td>38</td>
<td>2.0</td>
<td>7.5</td>
<td>4.4</td>
<td>1.46</td>
</tr>
<tr>
<td>Entrepreneurial Culture</td>
<td>38</td>
<td>3.6</td>
<td>7.6</td>
<td>6.0</td>
<td>1.13</td>
</tr>
<tr>
<td>Overall</td>
<td>38</td>
<td></td>
<td></td>
<td>5.2</td>
<td>.74</td>
</tr>
</tbody>
</table>

*Table 4.6: Sub-dimensions of Entrepreneurial Management in Extension*

4.2.3 Organizational Entrepreneurship

Organizational Entrepreneurship consisted of the combined dimensions of Entrepreneurial Orientation and Entrepreneurial Management, which included the sub-dimensions of each. The twenty-five items were summated to create an Organizational Entrepreneurship indicator. Figure 4.5 revealed that all regions reported a mean above 5.0 for the measure of Organizational Entrepreneurship. In each of the 4 regions, the mean for Entrepreneurial Orientation was slightly higher than the dimension of Entrepreneurial Management and the combined measure, Organizational Entrepreneurship (Figure 4.5).
Figure: 4.4: Organizational Entrepreneurship in Extension by region
4.3 Organizational Performance

To describe Organizational Performance in Extension this study explored both financial and non-financial dimensions. For the financial dimension, respondents were asked to report appropriated funding and non-appropriated funding for the year 2000 and the year 2004. These figures were used to compute five-year funding trend indicators. In addition to financial indicators, the non-financial dimension of organizational performance was measured through an Performance Satisfaction construct to indicate satisfaction with overall performance. Extension Directors were asked to rate six items on a Likert-type scale, regarding their organization’s performance as it was during the past five years.

4.3.1 Total funding

The total funding indicator for the financial dimension of Organizational Performance was a combination of appropriated and non-appropriated funding. The percent change in total funding from the year 2000 to the year 2004, was .10 (S.D. .12) and ranged from a minimum of -1.20 to a maximum of .40. There was some difference in the total change of regional group means as exhibited in Figure 4.6. The change in total funding indicator does not completely reflect the complex range of changes in various Extension organizations that have experienced significant shifts in federal, state, or local funding within the appropriated funding measure. It also does not reflect shifts in grants, contracts, gifts, and fees within
non-appropriated funding measures (Figure 4.7). Also, because only two years of data were requested and reported, there was a limitation due to the possibility that the year 2000 and/or the year 2004 represented unusual funding circumstances that did not capture the most complete trend for the Extension organization.

Figure 4.5: Percent change in total funding by region
4.3.2 Appropriated funding

Appropriated funding was the monies that were appropriated directly to Cooperative Extension by federal, state, and local governments. A frequency analysis indicated that 37% of the respondents reported decreases in appropriated funding between the year 2000 and the year 2004. The mean for the percent change in appropriated funding from the year 2000 to the year 2004 was .04 (S.D. .11), and ranged from a minimum of -.29 to a maximum of .24. There was some difference in the appropriated funding change of regional group means as exhibited in Figure 4.7.

4.3.3 Non-appropriated funding

Non-appropriated funding included non-appropriated government funding, foundation funding, and all monies generated through grants and contracts; gifts and donations; royalties, user fees, direct sales, and other methods. A frequency analysis revealed that 79% of the respondents reported increases in non-appropriated funding, when comparing the year 2000 and the year 2004. The mean for the percent change in appropriated funding from the year 2000 to the year 2004, was .27 (S.D. .28) and ranged from a minimum of -.30 to a maximum of .74. There was some difference in the non-appropriated funding change of regional group means as exhibited in Figure 4.7.
As funding portfolios change for Extension organization’s nationwide, the value of non-appropriated funding seemed evident as a frequency analysis indicated that while 37% of the respondents reported decreases in appropriated funding, only 16% reported a decrease in total funding. As part of the financial dimension of Organizational Performance, this study also explored the percent change in non-appropriated funding as a percentage of total funding. The overall mean was .05 (S.D. .06), with a range of means from a minimum of -.08 to a maximum of .20.

Figure 4.6: Percent change in appropriated and non-appropriated funding by region
Figure 4.7: Percent change in non-appropriated funding as a percentage of total funding change

4.3.4 Performance Satisfaction

A non-financial indicator of performance was measured through a series of six items indicating satisfaction with performance during the past five years, which summed into a single non-financial performance index, Performance Satisfaction. Extension Directors were asked to rate six items on a Likert-type scale, regarding their organization’s performance as it was during the past five years. On this scale,
1 represented unsatisfactory and 6 represented fully satisfactory. The mean for the summed index for the total population was 4.5 (S.D. .12), and ranged from a minimum of 2.8 to a maximum of 5.5. There was some difference in the regional group means and medians (Figure 4.8).

*Figure 4.8: Performance Satisfaction by region*
4.4 The relationship between Organizational Entrepreneurship and Organizational Performance in Extension

In order to explore the relationship between Organizational Entrepreneurship and the Organizational Performance, bi-variate correlations (Tables 4.7 and 4.10) and multiple regression analyses were explored.

4.4.1 Relationship between the non-financial dimension of Organizational Performance and selected variables

Regression of Performance Satisfaction on selected variables (Table 4.8) resulted in 58 percent of variance explained. Variables were entered using the hierarchical entry with the co-variates of tenure and state population change entered first, followed by the 3 sub-dimensions of Entrepreneurial Orientation (innovativeness, proactiveness, risk taking), and then the 5 sub-dimensions of Entrepreneurial Management (strategic orientation, resource orientation, management structure, reward philosophy, entrepreneurial culture). With Performance Satisfaction as the dependent variable, tenure and population change accounted for 5 percent of the variance, Entrepreneurial Orientation accounted for 32 percent of the variance and Entrepreneurial Management accounted for 21 percent of the variance (Table 4.8).

A review of regression Beta coefficients indicated that risk taking and tenure accounted for the highest relative contribution to the dependent variable Performance Satisfaction (Table 4.9). An examination of collinearity statistics indicated no collinearity problems and an examination of residuals showed no violation of the assumptions for linear regression.
<table>
<thead>
<tr>
<th>Variable</th>
<th>X₁</th>
<th>X₂</th>
<th>X₃</th>
<th>X₄</th>
<th>X₅</th>
<th>X₆</th>
<th>X₇</th>
<th>X₈</th>
<th>X₉</th>
<th>Y</th>
<th>Mean</th>
<th>Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovativeness (X₁)</td>
<td>1.00</td>
<td>.70</td>
<td>.47</td>
<td>.54</td>
<td>.23</td>
<td>.49</td>
<td>.13</td>
<td>.49</td>
<td>.23</td>
<td>.15</td>
<td>.40</td>
<td>5.6</td>
</tr>
<tr>
<td>Proactiveness (X₂)</td>
<td>1.00</td>
<td>.34</td>
<td>.40</td>
<td>.17</td>
<td>.17</td>
<td>.43</td>
<td>.30</td>
<td>.14</td>
<td>.37</td>
<td>.56</td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td>Risk Taking (X₃)</td>
<td>1.00</td>
<td>.58</td>
<td>-.07</td>
<td>.35</td>
<td>.37</td>
<td>.26</td>
<td>-.09</td>
<td>.02</td>
<td>.53</td>
<td>5.4</td>
<td>1.07</td>
<td></td>
</tr>
<tr>
<td>Strategic Orientation (X₄)</td>
<td>1.00</td>
<td>.16</td>
<td>.40</td>
<td>.40</td>
<td>.22</td>
<td>.03</td>
<td>.21</td>
<td>.54</td>
<td>5.1</td>
<td>1.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource Orientation (X₅)</td>
<td>1.00</td>
<td>.25</td>
<td>-.20</td>
<td>.49</td>
<td>.20</td>
<td>.12</td>
<td>.35</td>
<td>5.2</td>
<td>1.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management Structure (X₆)</td>
<td>1.00</td>
<td>.45</td>
<td>.11</td>
<td>.16</td>
<td>.02</td>
<td>.32</td>
<td>5.0</td>
<td>1.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reward Philosophy (X₇)</td>
<td>1.00</td>
<td>-.05</td>
<td>-.16</td>
<td>.02</td>
<td>.29</td>
<td>4.4</td>
<td>1.46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial Culture (X₈)</td>
<td>1.00</td>
<td>.12</td>
<td>.11</td>
<td>.46</td>
<td>6.0</td>
<td>1.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure (X₉)</td>
<td>1.00</td>
<td>.34</td>
<td>.23</td>
<td>5.3</td>
<td>3.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Population Change (X₁₀)</td>
<td>1.00</td>
<td>.10</td>
<td>.36</td>
<td>3.6</td>
<td>3.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance Satisfaction (Y)</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.5</td>
<td>.65</td>
</tr>
</tbody>
</table>

*Table 4.7: Summary data for independent variables and dependent variable, Performance Satisfaction (n = 38)*
Table 4.8: Variance summary: Regression of Performance Satisfaction on selected variables (n=38) (Hierarchical Entry)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.872</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population Change 2000-2004</td>
<td>-.020</td>
<td>-.100</td>
<td>.098</td>
</tr>
<tr>
<td>Tenure</td>
<td>.046</td>
<td>.280</td>
<td>.229</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>-.076</td>
<td>-.140</td>
<td>.400</td>
</tr>
<tr>
<td>Proactiveness</td>
<td>.013</td>
<td>.023</td>
<td>.364</td>
</tr>
<tr>
<td>Risk Taking</td>
<td>.230</td>
<td>.379</td>
<td>.532</td>
</tr>
<tr>
<td>Strategic Orientation</td>
<td>.126</td>
<td>.244</td>
<td>.536</td>
</tr>
<tr>
<td>Resource Orientation</td>
<td>.167</td>
<td>.268</td>
<td>.347</td>
</tr>
<tr>
<td>Management Structure</td>
<td>-.048</td>
<td>-.083</td>
<td>.320</td>
</tr>
<tr>
<td>Reward Philosophy</td>
<td>.100</td>
<td>.224</td>
<td>.294</td>
</tr>
<tr>
<td>Entrepreneurial Culture</td>
<td>.135</td>
<td>.236</td>
<td>.462</td>
</tr>
</tbody>
</table>
4.4.2 Relationship between Organizational Entrepreneurship and the financial dimension of Organizational Performance

This study also included an exploration of the relationship between selected variables and the financial indicator of performance, percent change in total funding. Regression of percent change in total funding on selected variables (Table 4.11) resulted in 32 percent variance explained. Variables were entered using the hierarchical entry with the co-variates of tenure and state population change entered first, followed by the 3 sub-dimensions of Entrepreneurial Orientation (innovativeness, proactiveness, risk taking), and then the 5 sub-dimensions of Entrepreneurial Management (strategic orientation, resource orientation, management structure, reward philosophy, entrepreneurial culture). With percent change in total funding as the dependent variable, tenure and population change accounted for 3 percent of the variance, Entrepreneurial Orientation accounted for 12 percent of the variance and Entrepreneurial Management accounted for 17 percent of the variance (Table 4.11).

A review of regression Beta coefficients indicated that strategic orientation and risk taking accounted for the highest relative contribution to the dependent variable, percent change in total funding (Table 4.12). An examination of collinearity statistics indicated no collinearity problems and an examination of residuals showed no violation of the assumptions for linear regression.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Intercorrelations</th>
<th>Mean</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$X_1$</td>
<td>$X_2$</td>
<td>$X_3$</td>
</tr>
<tr>
<td>Innovativeness (X_1)</td>
<td>1.00</td>
<td>.70</td>
<td>.47</td>
</tr>
<tr>
<td>Proactiveness (X_2)</td>
<td>1.00</td>
<td>.34</td>
<td>.40</td>
</tr>
<tr>
<td>Risk Taking (X_3)</td>
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<td>.58</td>
<td>-.07</td>
</tr>
<tr>
<td>Strategic Orientation (X_4)</td>
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<td>.16</td>
<td>.40</td>
</tr>
<tr>
<td>Resource Orientation (X_5)</td>
<td>1.00</td>
<td>.25</td>
<td>-.20</td>
</tr>
<tr>
<td>Management Structure (X_6)</td>
<td>1.00</td>
<td>.45</td>
<td>.11</td>
</tr>
<tr>
<td>Reward Philosophy (X_7)</td>
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<td>-.16</td>
</tr>
<tr>
<td>Entrepreneurial Culture (X_8)</td>
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<td>.11</td>
</tr>
<tr>
<td>Tenure (X_9)</td>
<td>1.00</td>
<td>.34</td>
<td>.13</td>
</tr>
<tr>
<td>% Population Change (X_{10})</td>
<td>1.00</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>Percent change in total funding (Y)</td>
<td>1.00</td>
<td>.10</td>
<td>.12</td>
</tr>
</tbody>
</table>

Table 4.10: Summary data for independent variables and dependent variable, Percent change in total funding (n = 38)
### Variance Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.181&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.033</td>
<td>.033</td>
</tr>
<tr>
<td>2</td>
<td>.389&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.152</td>
<td>.119</td>
</tr>
<tr>
<td>3</td>
<td>.567&lt;sup&gt;c&lt;/sup&gt;</td>
<td>.321</td>
<td>.170</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Tenure, Population Change 2000-2004

b. Predictors: (Constant), Tenure, Population Change 2000-2004, Risk Taking, Proactiveness, Innovativeness


#### Table 4.11: Variance summary: Regression of Percent Change in Total Funding on selected variables (n=38) (Hierarchical Entry)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population Change 2000-2004</td>
<td>.002</td>
<td>.041</td>
<td>.163 .045</td>
</tr>
<tr>
<td>Tenure</td>
<td>-2.25E-005</td>
<td>-.001</td>
<td>.130 -.001</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>.012</td>
<td>.118</td>
<td>.152 .075</td>
</tr>
<tr>
<td>Proactiveness</td>
<td>.023</td>
<td>.232</td>
<td>.248 .180</td>
</tr>
<tr>
<td>Risk Taking</td>
<td>-.047</td>
<td>-.428</td>
<td>-.163 -.351</td>
</tr>
<tr>
<td>Strategic Orientation</td>
<td>.044</td>
<td>.466</td>
<td>.274 .361</td>
</tr>
<tr>
<td>Resource Orientation</td>
<td>.015</td>
<td>.136</td>
<td>.143 .120</td>
</tr>
<tr>
<td>Management Structure</td>
<td>-.021</td>
<td>-.200</td>
<td>-.058 -.156</td>
</tr>
<tr>
<td>Reward Philosophy</td>
<td>.000</td>
<td>.002</td>
<td>-.050 .002</td>
</tr>
<tr>
<td>Entrepreneurial Culture</td>
<td>-.025</td>
<td>-.240</td>
<td>-.045 -.205</td>
</tr>
</tbody>
</table>

#### Table 4.12: Regression coefficients: Regression of Percent Change in Total Funding on selected variables (n=38) (Hierarchical Entry)
4.5 Summary of Findings

Extension directors in all four geographic regions reported substantial levels of Organizational Entrepreneurship, as measured through the Entrepreneurial Orientation and Entrepreneurial Management scales. For Organizational Performance, the five-year trend indicated a range of funding changes based on a financial report of 2000 and 2004 appropriated and non-appropriated funding. This confirmed evidence gathered through a 2004 Revenue Generation report referenced in Chapter 1 (Figure 1.3). Extension directors in all four geographic regions reported very high means of Performance Satisfaction. Through multiple regression, risk taking and tenure accounted for the highest relative contribution to the dependent variable Performance Satisfaction. Strategic orientation and risk taking accounted for the highest relative contribution to the dependent variable, percent change in total funding. These findings provide a framework for further discussion and recommendations.
CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

For nearly 100 years, Cooperative Extension has proven to be a successful model for local, state, and federal governments to work in cooperation with the national system of land-grant universities and citizens in local communities. Changes in society, technology, and funding have prompted Extension organizations to create new partnerships, programs, funding sources, and approaches to fulfill the mission of enabling people to improve their lives and communities through learning partnerships that put knowledge to work. While some organizations have adapted to a rapidly changing world and grown as a result of new opportunities, other organizations have found it difficult to adapt fully (Muzyka, deKoning, and Churchill, 1995; Pfeffer, 1994).

The literature revealed that the field of entrepreneurship has evolved to include a focus on organizational-level perspectives. Among the various views of entrepreneurship, this study aligned with work of Miller (1983), Stephenson (1983), and Schumpeter (1942), as well as emerging concepts focusing on public entrepreneurship. Miller (1983, p. 771) advocated that entrepreneurial organizations “engage in product market innovation, undertake somewhat risky ventures and are first to come up with proactive innovations.” Stevenson’s (1983) conceptualized entrepreneurship as a set of
opportunity-based management practices. Schumpeter (1942), emphasized innovation and economic success.

Public sector entrepreneurship definitions and themes were consistent with the mainstream entrepreneurship literature (Morris & Jones, 1999). Bellone and Goerl (1992) suggested that public sector entrepreneurship was an active approach to administrative responsibility that included generating new sources of revenue, providing enhanced services, and helping facilitate increased citizen education and involvement. Morris and Jones (1999, p. 74) proposed that public entrepreneurship was the process of creating value for citizens by bringing together unique combinations of public and/or private resources to exploit social opportunities.

5.1 Summary and Conclusions

Through survey research with Extension Directors in the 1862 land-grant institutions, this study examined the extent to which organizational-level entrepreneurship was evident in Extension and found that Extension organizations throughout the United States reported substantial levels of all measured dimensions of Organizational Entrepreneurship. The study also found that the majority of Extension organizations reported increases in total funding and had high levels of Performance Satisfaction.

On the overall Performance Satisfaction index, Entrepreneurial Culture had the highest mean of 6.0 (S.D. 1.13) on a scale of 1-8 (Table 4.7 and Figure 5.1). Stephenson and Jarillo (1990) noted that an organization with an entrepreneurial culture, encouraged
ideas, experimentation, and creativity. An Entrepreneurial Culture includes various elements such as value creation through innovation and change; freedom to grow and fail; commitment and personal responsibility; and ethics of integrity, trust and credibility (Cornwall & Perlman, 1990; Morris & Kuratko, 2002).

![Sub-dimensions of Organizational Entrepreneurship](image)

**Figure 5.1: Sub-dimensions of Organizational Entrepreneurship**

Various types of organizations have reported a range of responses to these measures of Organizational Performance (Brown et al., 2001; Covin & Slevin, 1989), with some variance based on industry sector, age of the organizations surveyed, and other factors that influence survey research (Dillman, 2000; Krosnick, 1999). Respondents to the questionnaire used in this study may have selected reasonable answers with limited
comprehension, memory retrieval, judgment, and response selection. An additional limitation is potential social desirability bias in which respondents overreport admirable attitudes and behaviors and underreport those that are less respected.

Results from multivariate data analysis indicated that risk taking and tenure accounted for the highest relative contribution to the dependent variable Performance Satisfaction. Strategic orientation and risk taking accounted for the highest relative contribution to the dependent variable, percent change in total funding. Entrepreneurship is about risk and reward (Morris & Kuratko, 2002). However, both risk and reward involve perceptions which influence how survey respondents judge what is cautious or bold. Strategic orientation determines whether an organization is driven more by opportunity or by resources currently controlled. In addition to Strategic Orientation, Entrepreneurial Culture was the other sub-dimension included in the regression model. The individual sub-dimensions of Organizational Entrepreneurship are distinct yet related measures, therefore each dimension, as well as the combined scales can be used for further discussion and development of entrepreneurship in Extension organizations.

All Extension organizations reported indications of Organizational Entrepreneurship during a time when changing financial portfolios required greater effort to generate both appropriated and non-appropriated funding. Change has been a constant feature for the Extension system since its creation almost 100 years ago. The system has changed significantly in the past 35 years, expanding programming and adding new categories of Extension through the Historically Black Land Grant Colleges, the Territorial colleges, the District of Columbia, and Tribal Colleges. In recent years, the
rapid pace of change has placed intense demands on Extension organizations and how the system maximizes opportunities presented by these changes will help determine how Extension will look in the future.

As change continues to be a theme permeating throughout all types and sizes of organizations, including Extension, the field of entrepreneurship provides insight through valuable theory and practice. When adopted, these principles will not necessarily result in a high degree of entrepreneurial intensity all of the time and in all situations. However, development of an entrepreneurial orientation and entrepreneurial behaviors can improve performance as the principles become embedded throughout the organization. Results from this study indicated that Extension organizations were promoter-oriented, but entrepreneurship is not a static phenomenon. The framework can be used as Extension organizations continue to build upon the rich history of the organizations and maximize new opportunities most relevant for the future.

5.2 Recommendations

This study focused on the organizational-level entrepreneurship and performance based on public and private sector entrepreneurship theory and practice. Using the research findings and framework from this study, as well as diverse perspectives from the literature, Organizational Entrepreneurship in Extension can be enhanced by developing the entrepreneurial principles and process in Extension organizations, as well as conducting and learning from future research and practice.
Extension organizations across the United States have faced unique challenges and as resource and impact portfolios become more diversified, the opportunity-based perspective of Organizational Entrepreneurship can be relied upon for actively interpreting and acting upon opportunities. Each organization, each region, and the entire Cooperative Extension System can integrate principles of entrepreneurship, while maintaining the quality and integrity of Extension.

5.2.1 Develop risk taking and strategic orientation, two sub-dimensions identified in this study to account for the highest relative contribution to the dependent variables

To develop risk taking, extension organizations can:

- Balance the Extension portfolio with projects ranging in degrees of risk and return; requiring different development and payoff times; targeting current versus new markets; utilizing familiar or emerging technologies.

- Recognize that organizational and personal risks are driven by cognitive biases and perceived intensity of threat based on financial, emotional, reputation or other implications. Create an award for individuals or groups that accepted uncertainty and ambiguity, then took risks, perhaps failed on numerous occasions, learned, and then accomplished their objective.

- Examine if there have been situations when those trying new ideas experienced negative consequences, because when this happens, people become risk averse, stop experimenting and mistakes are covered up
which limits organizational learning results. Empower people throughout the organization with tools, resources and systems for continuous information flow and decision making.

To move toward an opportunity-driven rather than resource-driven strategic orientation, Extension organizations can:

- Shift emphasis from budgets, human resource constraints, and other resource challenges to opportunity.
- Gather information and ideas on perceived limitations that have halted action to pursue opportunities. Use this information to identify patterns and improve systems that support strategic orientation. This shifts primary attention from resources to opportunity so that decisions and actions are guided more by stakeholder-focused ends rather than by an excessive and restrictive fixation on the means.

5.2.2 Develop other interrelated factors of Organizational Entrepreneurship

To improve innovativeness, provide tools, resources, and systems that tap into stakeholder-focused opportunities and encourage, measure, and reward innovative individual and team behavior. Identify stimulants and obstacles for the flexibility and fast action needed to identify, experiment with and develop ideas. Use trends unveiled through opportunity findings and involve lead users and innovation champions to develop and refine innovations. Integrate measures of innovation into the organizational reporting and decision systems. Feature a range of innovations in Extension and link them to
relevant impact multipliers and narrative that reinforce stakeholder-focused entrepreneurial process.

Proactiveness is linked to locus of control, therefore, in order to promote a bias for action, Extension organizations should focus on results rather than processes and personnel should be enabled with the flexibility, authority, and accountability to link actions to meaningful outcomes (Harper, 1994). A person with an internal locus of control is alert to opportunities and tends to believe that events are contingent upon his/her own behavior or his/her relatively permanent characteristics (Rotter, 1966). Those with an external locus of control tend to see their actions as less effective in producing outcomes because of lack of power or predictability because of the great complexity of the forces. Balance stories of partnership with reports of Extension organizations providing fast-actions that lead to being first with solutions and innovations that addressed rapidly emerging opportunities.

To advance resource orientation, recognize personnel who reach across organizational boundaries to leverage resources for high priority purposes. Highlight best practices demonstrating the value of accessing, not necessarily owning resources. Develop unique and flexible resources for competitive advantage that are valued by stakeholders. At all levels, use slack resources such as time, money and materials for idea development that supports the stakeholder-focused entrepreneurial process. Match levels of formal approval systems with levels of resources requested.

Management structure is another factor Extension organizations could develop. To serve stakeholders whose needs are not organized in the pattern of the Extension
organization chart, personnel should be encouraged to develop ideas and share resource
beyond the boundaries of departments, state organizations and local or program teams.
Enhance a flat and flexible structure through Communities of Practice (Snyder & Briggs,
2003) and other teams with adaptable role definitions, authority and responsibilities that
are contingent on changing circumstances and aligned with environment and strategy

To enhance reward philosophy, Extension organizations can go beyond tenure-
based rewards and link short- and long-term strategy, goals, performance results, and
creative compensation such as indirect pay, direct pay, recognition, challenging work,
and learning opportunities. Tailor recognition and reward to the unique interests of the
people involved, but don’t appear to be random or casual (Kanter, 1994). Morris and
Kuratko (2002, p. 247) suggest numerous examples of creative approaches to rewarding
employees.

Although modifying organizational culture can be challenging (Barney, 1986),
Extension organizations can adopt integrated actions such as clarifying meaning,
identifying stories, determining strategic initiatives, recognizing small wins and unique
contributions that distinguish the organization, developing shared knowledge and buy in
of key measures and milestones, focusing on communication and symbols, supporting
leadership development (Cameron, 2004).

5.2.3 Develop a stakeholder focus

Stakeholders are any individuals or groups that can influence or are affected by
the achievement of the organization’s objectives (Freeman, 1984). Extension
organizations involve diverse stakeholder groups, including customers, suppliers, employees, volunteers, advocates, funding agencies, alliances, networks, media, delivery partners, co-developers, as well as other public and private groups. Research has suggested that long-term organizational success depends upon the organization’s ability to create value and satisfaction for a variety of stakeholders (Berman, Wicks, Kotha, and Jones, 1999; Graves & Waddock, 1994; Ogden & Watson, 1999; Ruf et al., 2001).

These stakeholders include intrapreneurs, who are employees behaving like entrepreneurs on behalf of the organization (Pinchot, 1985). These intrapreneurial individuals and cross disciplinary project teams are empowered throughout the entrepreneurial process. Stakeholders also include alliances and networks, demonstrating that collective entrepreneurial efforts exceed the sum of individuals’ contributions (Reich, 1987).

When managing multiple constituencies, tensions are inevitable due to divergent demands and various levels of power and urgency (Mitchell, Agle, and Wood, 1997). Organizational decisions are further complicated when stakeholders’ needs or demands are dynamic, latent, or difficult to discern (Veryzer, 1998; Voss et al., 2004). Effective organizations have a clear, challenging, and powerful vision that aligns activities that focus on customers and empower employees. A wide range of talent, with individual characteristics and cognitive styles, is required to support all stages of the entrepreneurial process (Thompsen, 2002).
5.2.4 Throughout the Extension organization, increase awareness of the entrepreneurial process (Figure 2.1)

Opportunity

Entrepreneurial organizations draw upon diverse perspectives to identify and evaluate opportunities. Because of the increased complexity of Extension organizations, tracking trends and exploiting opportunities presents some challenges. To address this complexity, Extension organizations can benefit from enhanced scanning for and development of opportunities from many diverse perspectives. By expanding who scans, how they scan, where they scan, how they scan, and what they scan for, a variety of stakeholders can be involved in identifying, evaluating, and acting upon opportunities that arise from social, economic, political, technological, institutional, and other shifts.

For Extension organizations, social factors include changes in stakeholder profiles, preferences, expectations, and transactional behaviors. Economic factors include new or altered funding sources, new competition for funding, and other financial forces on stakeholders. Political factors encompass regulatory issues, legal aspects, and the current political climate that influences the funding, development, delivery, dissemination, and evaluation of Extension initiatives. Technology factors consist of everything that affects Extension products, services, markets, or interaction with stakeholders that comes as a result of changes in technology. Institutional factors include shifts in resources, processes, procedures, structures, and other ways of conducting business in the scope of the national Extension system, the state land-grant system and local operations.
In addition to employee involvement in opportunity-focused activity, outsiders often have more freedom to direct their attention and energy to this part of the entrepreneurial process. Their organizational detachment enables them to perceive opportunities without the distraction of operational concerns surrounding the organization. As Roberts and King (1996) argued, it can be better to be on the outside cultivating ties with well-placed insiders than it is to be on the inside suffering from restrictions imposed by bureaucratic constraints. Together, internal and external opportunity seekers can foster alertness to opportunities and collaborate for information acquisition, shared interpretation, and creative exploration for further experimentation and development. The challenge is to go from chaos to concept by taking a lump of unorganized information, seeing patterns, and extracting order from the mess (Collins, 2001, p. 11). Krueger (2000) found that measures of opportunity perception correlated with the measures of Entrepreneurial Orientation.

Innovation

Exploit opportunities to maximize value creation. As Extension organizations develop a portfolio of innovations, resource investment decisions must be made based on assessment of added stakeholder value; degree of uncertainty and risk; short and long-term objectives and implications; key drivers that influence innovation success; and projected project impacts. The innovation stage of the entrepreneurial process benefits from internal and external stakeholder interaction because sometimes contributions from outside Extension’s knowledge and experience base trigger the creative solutions needed
to innovate. Taking the entrepreneurial marketing approach to innovation, this stage brings the Extension organization and stakeholders even closer together as stakeholders become active participants in the organization’s decisions on what products, programs, and services to keep or preserve, what to destroy or eliminate, and what to create that is new.

Strategy

Strategy for Extension organizations evolves through the context of the formal and informal organizational structure, processes, decision authority systems, resources, relationships, and work-flow. Strategy is influenced by the environment which includes past, current, and future political, economic, social, institutional, technological, and demographic aspects. Extension organizations can benefit from the organic perspective of strategy because of the diverse group of stakeholders, multiple influences, the complex nature of decision making, and the dynamic contexts of the national Extension system, state land-grant institution, and local operations. As the Extension organization and the environment co-evolve, strategy plays a critical role in moving opportunities and innovations forward by formulating and enabling strategies that capitalize on synergies, reconcile contradictions, and concentrate on stakeholder-focused priorities. The organic perspective of strategy supports the strategic orientation continuum addressed in earlier chapters, that range from trustee and mechanistic to promoter and organic orientations.
Operations

In the operational stage of the process, Extension organizations shift focus to functions and meaningful measures of performance. Performance effectiveness measures could be addressed from various approaches, including goal, system resource, internal process, stakeholder, or competing values approaches. Entrepreneurial organizations develop measurements that encourage opportunity identification, innovation and organic strategic management. Depending on the approach and the short and long-term priorities of the Extension organization, various performance measures could be gathered from multiple sources for continuous learning improvement. Entrepreneurial organizations exist on the boundary between chaos and order, relying on self-organizing systems in which the choices of individuals and teams lead naturally to alignment and cost effectiveness in fulfilling of stakeholder needs (Pinchot & Pellman, 1999). Ultimately, the operational stage addresses antecedents and barriers to performance and leads to many new opportunities, innovations, and strategies that replace or enhance existing operations.

5.2.5 Conduct and learn from future research and practice

In addition to this study, there are numerous opportunities for future research based on multiple respondents, other interactive variables, additional methods to gather and analyze data, and investigations into related fields of study. The bulk of entrepreneurship has primarily focused on profit ventures, especially during the start-up phase of operation. As lines blur between public, private and not-for-profit ventures,
there is a need for research focused in a variety of contexts, including new organizational alliances.

Engage multiple respondents

This study used a single respondent, an approach that has both advocates and critics. The literature dealing with the justification for using a single respondent to make inferences about an organization’s situations has been supported by Snow and Hrebiniak (1980, p. 320) who advocated that “top managers have the best vantage point for viewing the entire organizational system,” and Hambrick (1981), who strongly promoted using only the CEO. Critics of using the sole respondent included Phillips (1981), who argued that no single executive could accurately report on a wide range of organizational concepts, because of systematic sources of error such as bias and random error resulting from placing unrealistic demands on respondents to make complex judgments about organizational characteristics. Future research could include multiple respondents, including both internal and external stakeholders. For example, the Corporate Entrepreneurship Assessment Instrument, developed Kuratko, Montagno, and Hornsby (1990), could be used for county directors and specialists to report on organizational entrepreneurship. Various stakeholders could provide input on satisfaction with overall performance.
Integrate other variables

A multitude of options are available for future research integrating additional variables. The existing scales could be refined through more in-depth development and validation of the items within the sub-dimensions of Organizational Entrepreneurship and Organizational Performance. Relationships could be further explored by looking more closely at items such as state population, tenure and environmental factors. According to the organic perspective of strategy, performance could also be explored as an independent variable. Additional dependent variables could include performance over different periods of time; shifts in the financial value of volunteers and other in-kind contributions; stakeholder satisfaction (Anderson & Sullivan, 1993); or factors influencing sustainability of the Organizational Entrepreneurship-Organizational Performance linkage. Other variables that could interact with entrepreneurship and performance could include scanning intensity as measured by Barringer and Bluedorn (1999); market orientation, using the MARKOR scale developed by Kohli, Jaworski and Kumar (1993) or the MKTOR scale developed by Narver and Slater (1990); various dimensions from an organizational flexibility scale (Khandwalla, 1977); learning orientation (Yim-Teo, 2002); new economy indicators (Atkinson & Court, 2002) or leading indicators that represent value drivers (Kaplan & Norton, 2001).

Explore individual and team entrepreneurship

Because entrepreneurship has been explored from individual, team, and organizational perspectives, future studies could focus on team dynamics, as well
intrapreneurial characteristics and behaviors of individuals at all levels of the organization. Data could be gathered and explored through a variety of methods. Findings from these additional studies enhance those focused on organizational-level factors.

Utilize additional methods

To better understand the relationship between Organizational Entrepreneurship and Organizational Performance in Extension, additional methods could be used to gather and analyze data. Additional items could be generated through deductive and inductive approaches. An inductive approach could begin with qualitative interviews (Hinkin, 1995) while the deductive approach would begin with theoretically based construct definitions of established dimensions. Researchers could combine quantitative methods with qualitative approaches that attempt to increase understanding of perceptions of the multiple influences unique to Extension organizations (Miles & Huberman, 1994; Morris & Stenberg, 1991). Qualitative methods have been used for research in a variety of entrepreneurial studies, including entrepreneurial cognition research (Hindle, 2004) and the exploration of the entrepreneurship and marketing interface (Carson & Coviello, 1996). While qualitative methods are used more extensively in many other domains of the social sciences, there is a need for more scholars of entrepreneurship to involve themselves in qualitative methodology. Chandler and Lyon (2001) reviewed more than four hundred refereed journal articles in top-tier journals and found that in the broad field of entrepreneurship, only 18% of the empirical studies in their sample utilized any
qualitative techniques. Because entrepreneurship is not a static concept, original research designs and context specific studies are fundamental to broaden and deepen existing research.

Explore additional Extension organizations and partnerships

In addition to the population of Extension organizations in this study, other Extension organizations throughout the world could be considered for future research. Each type of Extension organization has characteristics unique in structure, funding and delivery. Here in the United States, there are additional Extension organizations at Historically Black Land Grant Colleges, the Territorial colleges, the District of Columbia, and Tribal Colleges. Future research could have a vast reach because Extension organizations serve through an integrated and complex set of public and private activities internationally. Worldwide agricultural Extension organizations have long played a vital role in advancing technology transfer and human resource development in 115 developed and developing countries. According to the World Bank, Extension operations of the past four decades is one of the largest institutional development effort the world has ever known (Anderson & Feder, 2004). In addition, future research could explore inter-organizational networks, research and Extension consortia and strategic alliances that are used to develop original and innovative ways to add stakeholder value.

Future research should tap into the growing body of research and practice in the field of entrepreneurship and related disciplines, such as management, public administration, organizational development, strategy, innovation, higher education and
lifelong learning. Extension organizations benefit from research focusing specifically on entrepreneurship in public and not-for-profit organizations.

Conduct research focused on individual and team entrepreneurship

Because entrepreneurship involves interrelated individual, team, and organizational factors, a variety of methods could be used to gather and analyze additional data. Findings could be used to increase awareness and development of individual and team entrepreneurship throughout Extension. Factors focused on individual characteristics, cognitive styles, and behaviors could be explored through instruments such as McClelland’s (1987) characteristics of successful entrepreneurs or Pinchot’s (1985) resources on intrapreneurship. Extension organizations focusing on teams can explore the work of Pinchot (1999), as well as team entrepreneurship theory advocated by authors such as Kreueger (2002) and Stewart (1989). This research adds depth through involvement of Extension personnel at many levels throughout the organization.

5.2.5 Summary of recommendations

This study made a contribution to the field of entrepreneurship and to organizational development in university Extension. Understanding and improving entrepreneurship in Extension responds to the call for theoretical and practical solutions to the new competitive landscape (Hamel & Prahalad, 1994; Bettis & Hitt, 1995). To further develop Organizational Entrepreneurship, Extension can leverage the system’s
national infrastructure that links citizens and communities with their public universities and all levels of government. New initiatives such as eXtension that build on knowledge-based communities of practice and Outreach and Engagement efforts that encourage cross-campus collaboration, offer entrepreneurial opportunities beyond the scope of individual organizations. Entrepreneurial individuals and teams in Extension organizations have a proactive approach and an experimental and learning attitude as they seek to determine the nature of a problem or opportunity and its cause; the potential range of innovative solutions; and the most valuable strategy to access resources, accomplish desired outcomes and achieve meaningful impacts. Extension personnel must create a shared vision, be proactive in dealing with the future, support change, champion the holistic view of Extension, and create an environment for innovation (Buchanan, 1993).

Although budget cuts at the federal, state, or local levels have been a primary reason for Extension organizations to emphasize non-appropriated funding and entrepreneurial initiatives, much more can be gained by taking a holistic approach to the entrepreneurial process and the key factors explored in this study. Extension organizations must be creative in continuously facing the various conflicts that public managers face when attempting to deliver stakeholder value. As organizations become more entrepreneurial, there will inevitably be tension between rules, roles, and routines and the evolving flow of work that often does not fit established procedural channels (Brower & Abolafia, 1996). Throughout all stages of the process, especially the operational stage, organizations must find cooperative and constructive (Tjosvold, 1993) solutions when constrained from implementing a practical solution because of established
personnel or procurement procedures. In addition to procedural conflicts, Extension organizations must also contend with substantive and affective conflicts (Burnett, 1991). Although contradictions are sometimes perplexing aspects of the entrepreneurial process, entrepreneurship reconciles opportunities and action, vision and venture, resources and organizational architecture, achievement of long-term equity value and short-term effectiveness, creativity and discipline, internal and external aspects of managing change (Bratnicki, 2005, p.22).

Entrepreneurship is a journey and not a stable destination. As society changes, new technologies evolve and competition increases the entrepreneurial process and principles can guide organizations in linking opportunities with behaviors that are essential for carrying out the Extension mission. In a rapidly changing world, organizations need to continually leverage their human, financial, political and social capital to identify new opportunities beyond existing competencies (Hamel, et al., 1989; Mintzberg, 1994). Extension organizations can use the Organizational Entrepreneurship framework to develop dynamic capabilities that integrate, build, renew and reconfigure internal competencies (Teece, Pisano, and Shuen, 1997) so change becomes more fluid.

Extension organizations are unique in a number of ways and can enhance much of their existing efforts by involving personnel throughout the organization and engaging advisory groups and other volunteers in the entrepreneurial process. As the organization approaches new opportunities and challenges, everyone can be involved in decisions that impact what elements of the organization’s rich tradition and core values to keep; what programs, processes and assumptions to destroy; and what new approaches, behaviors
and innovations to create. To benefit from the framework and findings in this study, Extension organizations can engage in focusing on priorities that improve organizational performance through organizational entrepreneurship. Organizations can maintain a balanced effort of conducting additional research for new knowledge while simultaneously exploiting existing knowledge to develop opportunity-based individual, team, and organizational entrepreneurship.
APPENDICES

A  Questionnaire
B  Panel of experts
C  Cooperative Extension System Regions
D  Exemption from human subjects committee review
Organizational Entrepreneurship in Extension

A Survey of State Extension Service Directors and Administrators

Purpose: As the 21st century unfolds, entrepreneurial actions are viewed as critical pathways to value creation and improved performance in organizations of all types and sizes. This study examines the relationship between organizational entrepreneurship and organizational performance within the Cooperative Extension System (CES), as perceived and reported by state Extension Director/Administrators and their direct supervisors.

All information will remain confidential: Results will be aggregated by categories and reported only by statistical summaries. Information about individual organizations will not be identified.

Option: You may also complete this survey online. An E-mail invitation, with a direct link, will be sent to you within the week.

Timeline: Please complete this survey by May 20, 2005.

Contact: Julie Fox, fox.264@osu.edu; 740-289-2071;
OSU South Centers 1864 Shyville Rd., Piketon, OH 45661.

Overview: This study focuses on organizational entrepreneurship, using a modified instrument that measures both Entrepreneurial Orientation, which is based on the extensively tested Covin and Slevin's scale, and Entrepreneurial Management, which is based on Stevenson's conceptualization of entrepreneurship as a set of opportunity-based management practices which can help organizations remain vital and contribute to firm and societal value creation. This survey begins with items that are measured through a forced choice, eight-point opposite statement, organizational-level scale.

EXAMPLE: For the following statement, the respondent believes that their organization defines strategies based slightly more on opportunity than on existing resources.

<table>
<thead>
<tr>
<th>Strategic Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. As we define our strategies, our major concern is how to best utilize the resources we control.</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

Thank you for your participation.
A confidential report will be sent to you upon completion of this dissertation.
Organizational Entrepreneurship in Extension
A Survey of State Extension Directors and Administrators - 2005

Section I: Organizational Entrepreneurship
Please respond as candidly as possible to the following statements by circling a number between 1 and 8 on this opposite statement scale that best represents your organization as it was during the past five years. In order to get a complete assessment of organizational entrepreneurship, this study explores both entrepreneurial orientation and entrepreneurial management.

Entrepreneurial Orientation: This part of the scale is based on an extensively tested scale that includes a combination of three sub-dimensions: innovativeness, proactiveness, and risk-taking.

<table>
<thead>
<tr>
<th>A. Innovation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our organization rarely markets new products/services</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Changes in products or services have been minor.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Typically, our organization responds to actions which other organizations initiate.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Compared to similar organizations, we are seldom the first to introduce new products or services, administrative techniques, operating technologies, etc.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>7</td>
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</table>

B. Proactiveness

<table>
<thead>
<tr>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typically our organization initiates actions which other organizations respond to.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

C. Risk-taking

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our top leaders have a strong tendency to pursue low-risk projects (with normal and certain rates of return.)</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Our top leaders believe that, owing to the nature of the environment, it is best to explore ideas gradually via careful, incremental behavior.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>When confronted with decision-making situations involving uncertainty, we typically adopt a cautious &quot;wait-and-see&quot; posture in order to minimize the probability of making costly decisions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Entrepreneurial Management: This part of the scale is based on Stevenson's contrast of opportunity seeking behaviors of entrepreneur-type firms that pursue and exploit opportunities regardless of resources controlled with trustee-type firms that focus on efficiently using resources controlled.

<table>
<thead>
<tr>
<th>D. Strategic Orientation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>As we define our strategies, our major concern is how to best utilize the resources we control.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>As we define our strategies, we are driven by our perception of opportunity. We are not constrained by the resources at (or not at) hand.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>We must the opportunities we pursue on the basis of our current resources.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Our fundamental task is to pursue opportunities we perceive as valuable and then to acquire the resources to exploit them.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>The resources we have significantly influence our business strategies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Opportunities control our business strategies.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
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</tbody>
</table>
### Section continued

#### F. Resource Orientation

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Since we do not need resources to commence the pursuit of an opportunity, our commitment of resources may be in stages.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>All we need from resources is the ability to use them</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>13</td>
<td>In exploiting opportunities, having the idea is more important than just having the money</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

#### F. Management Structure

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>We prefer tight control of funds and operations by means of sophisticated control and information systems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15</td>
<td>We strongly emphasize getting things done by following formal processes and procedures.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>16</td>
<td>We strongly emphasize holding to tired and true management principles and industry norms.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>17</td>
<td>There is a strong insistence on a uniform management style throughout the organization.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>18</td>
<td>There is a strong emphasis on getting line and staff personnel to adhere closely to their formal job descriptions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

#### G. Reward Philosophy

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Our employees are evaluated and compensated based on their responsibilities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>20</td>
<td>Our employees are usually rewarded by promotion and annual raises.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

#### I. Entrepreneurial Culture

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>We have many more promising ideas than we have time and the resources to pursue.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>22</td>
<td>The products and services we offer are based on good information about customers, the market, and/or changes in society-at-large.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>23</td>
<td>We never experience a lack of creative ideas that we can convert into products/services that are valued by our key stakeholders.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>24</td>
<td>Personnel realize that the way they perceive the marketplace must be continually explored.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>25</td>
<td>Personnel basically agree that our organization's ability for continuous learning is a priority that enhances performance.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Section II: Organizational Performance

Understanding and improving performance is a central aim of entrepreneurship. Because performance is multidimensional in nature, the performance construct in this study consists of both financial and non-financial indicators. **All information will remain confidential.**

### A. Financial Performance

In row one, please write in the total amount of your appropriated funding for the year 2000 and the year 2004 (moneys that were appropriated directly to Cooperative Extension by federal, state, and local governments).

In row two, please write in the amount of the revenue generated through non-appropriated funding for the year 2000 and the year 2004 (including non-appropriated government funding, foundation funding, and all monies generated through grants and contracts; gifts and donations; royalties, user fees, direct sales, etc.).

The combined amounts of appropriated funding and non-appropriated funding represent your total funding for the year 2000 and the year 2004.

If you do not have this information available, please provide contact information for the individual in your organization who can provide this data. Name: Title: Phone: E-mail:

<table>
<thead>
<tr>
<th>Revenue</th>
<th>2000</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Appropriated funding (federal, state &amp; local)</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>2 Non-appropriated funding</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

### B. Satisfaction with Performance

Some of the very best managerial actions do not yield measurable financial performance but they define the organization and give meaning to its different activities. Satisfaction is a fundamental measure of the perception of successful performance. Please respond as candidly as possible to the following statements by circling a number between 1 and 6 that best represents your organization as it was during the past five years, with 1 representing unsatisfactory and 6 representing fully satisfactory.

<table>
<thead>
<tr>
<th>Satisfaction with organizational performance</th>
<th>Unsatisfactory</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Overall performance -</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>overall performance of your organization based on outputs &amp; impacts</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>2 Retaining key employees -</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>ability of your organizations to keep the organization’s best &amp; most talented people</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>3 Delivering quality products and services for external audiences - including new programs, new delivery methods and reaching new people</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>4 Improving internal processes -</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>such as new operational structures or new methods to process financial transactions, enhance communications, or create efficiencies in workflow</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>5 Gathering and using knowledge -</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>such as market research, new advisory groups, trend reports or other approaches that provide Extension personnel with timely and quality information for decision-making</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>6 Managing change -</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>personnel throughout our organization enhance organizational performance by being attentive to external changes and leading internal changes in structure, strategy &amp; operational methods.</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>

### C. How long have you been in a Director or an Administrator of Extension (# of years)?

_____ 

### D. Please attach any additional comments or support documentation.

---

Thank you for your participation.

A confidential report will be sent to you upon completion of this dissertation.

---

Code ________ A code number is used for follow-up purposes and to facilitate the data entry process.
Organizational Entrepreneurship in Extension
Request for your participation

6 May 2005

Personalized Letter

Interest in the benefits of entrepreneurship continues to grow. Please join me in exploring the relationship between organizational entrepreneurship and organizational performance within the Cooperative Extension System (CES).

I would greatly appreciate your participation in this project, which is being conducted for my dissertation in Human & Community Resource Development at the Ohio State University. In order for the information from the study to be truly representative, your participation is essential. Each organization will be invited to have only two respondents – the Extension Director/Administrator and their direct supervisor.

Completing this questionnaire should require 15 to 20 minutes. All data will be held in the strictest confidence. Results will be reported only in statistical summaries and in aggregate by categories so that information about individual organizations cannot be identified. To thank you for your participation, I will send to you a copy of the executive summary and a confidential report for your Land Grant University program. Please complete the survey by May 20, 2005.

If you have any questions or concerns, please contact me, Julie Fox, at fox.264@osu.edu or 740-289-2071. A stamped and addressed envelope has been included for return of the questionnaire. If it more convenient, you can complete it on the Internet. A direct link will be emailed to you within the week.

Thank you for your participation.
Sincerely,

Julie Fox
Ph.D. Candidate

Keith Smith
Director, Ohio State University Extension

Joseph Gillem
Professor, Human & Community Resource Development

Letter included with questionnaire
APPENDIX B

PANEL OF EXPERTS
PANEL OF EXPERTS

National Contacts

Dick Wooten
Director, Extension and Outreach
NASULGC
Washington, D. C.

James C. Wade
Director, Center for Agricultural and Natural Resources Policy
Department of Agricultural and Resource Economics
University of Maryland
(Replaced Dick Wooten July 1, 2005 - previously at the University of Maryland)

Regional Contacts

Ronald A. Brown, Executive Director
Association of Southern Regional Extension Directors
Mississippi State, MS

Carl W. O’Connor
Executive Director
North Central Cooperative Extension Association
Madison, WI

Past State Director Contacts

Lyla E. Houglum, Director of Special Initiatives
Oregon State University

Sharon D. Anderson, Special Consultant to the President
National 4-H Council
APPENDIX C

COOPERATIVE EXTENSION SYSTEM REGIONS
<table>
<thead>
<tr>
<th>Western</th>
<th>North Central</th>
<th>Southern</th>
<th>Northeast</th>
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<td>Illinois</td>
<td>Alabama</td>
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<td>Arkansas</td>
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<td>Iowa</td>
<td>Florida</td>
<td>Maine</td>
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<td>Kansas</td>
<td>Georgia</td>
<td>Maryland</td>
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<td>Michigan</td>
<td>Kentucky</td>
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<td>Louisiana</td>
<td>New Hampshire</td>
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<td>Mississippi</td>
<td>New Jersey</td>
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<td>North Carolina</td>
<td>New York</td>
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<td>Virginia</td>
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<td>American Samoa</td>
<td></td>
<td>Puerto Rico</td>
<td></td>
</tr>
<tr>
<td>Guam</td>
<td></td>
<td>Virgin Islands</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D

EXEMPTION FROM HUMAN SUBJECTS COMMITTEE REVIEW
TITLE PAGE - APPLICATION FOR EXEMPTION
FROM REVIEW BY THE INSTITUTIONAL REVIEW BOARD
The Ohio State University, Columbus OH 43210

For office use only:
PROTOCOL NUMBER:
2005E6192

Principal Investigator

Name: Julie Marie Fox
Phone: 614-292-4900

Department or College: College of Food, Agricultural & Environmental Sciences, Department of Human & Community Resource Development
E-mail: fox.264@osu.edu

Campus Address (room, building, street address):
The OSU South Centers
1864 Shyville Road
Piketon, OH 45661

Signature: [Signature]
Date: 3/29/05
Fax: 514-292-1953

Co-Investigator

Name: N/A
Phone:

E-mail:

Signature:
Date:
Fax:

Co-Investigator

Name:
Phone:

E-mail:

Signature:
Date:
Fax:

Protocol Title
Entrepreneurial Management - Performance Linkage in University Extension

Source of Funding
N/A

For Office Use Only:

☑ Approved.
Research has been determined to be exempt under these categories: # 2
Research may begin as of the date of determination listed below.

☐ Disapproved.
The proposed research does not fall within the categories of exemption. Submit an application to the appropriate Institutional Review Board for review.

Date of determination: 4/7/05
Signature: [Signature]
Office of Research Risk Protection

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REFERENCES


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