Rochester Institute of Technology
RIT Digital Institutional Repository

Presentations and other scholarship | Faculty & Staff Scholarship

3-2008

# The Impact of Organizational Goal Setting on the Industrial Munificence-goal Attainment Relationship

Zhi Tang
*Rochester Institute of Technology*

Benjamin Powell
*Appalachian State University*

Louis Marino
*University of Alabama - Tuscaloosa*

Jintong Tang
*Saint Louis University*

Pat Dickson
*Wake Forest University*

Follow this and additional works at: https://repository.rit.edu/other

## Recommended Citation

Tang, Z., Powell, B., Marino, L., Tang, J., & Dickson, P. (2008). The impact of organizational goal setting on the industrial munificence-goal attainment relationship. International Journal of Business and Management 3(3): 107-124 http://dx.doi.org/10.5539/ijbm.v3n3p107

This Scholarly Blog, Podcast or Website is brought to you for free and open access by the RIT Libraries. For more information, please contact repository@rit.edu.

# The Impact of Organizational Goal Setting on the Industrial Munificence-goal Attainment Relationship

Zhi Tang (corresponding author)

E. Philip Saunders College of Business, Rochester Institute of Technology,
108 Lomb Memorial Drive, Rochester, NY, 14623-5608
Tel: 585-475-5991 E-mail: ztang@cob.rit.edu

Benjamin C. Powell

Center for Entrepreneurship, Walker College of Business, Raley 4091
Appalachian State University, Boone, NC 28608-2089

Tel: 828-262-8332 E-mail: powellbc@appstate.edu

Louis Marino

Department of Management and Marketing, University of Alabama

Tuscaloosa, Alabama 35487 USA

Tel: 205-348-8946 E-mail: lmarino@cba.ua.edu

Jintong Tang

Department of Management, Saint Louis University

3674 Lindell Blvd., St. Louis MO 63108

Tel: 314-977-3850 E-mail: jtang@cba.ua.edu

Pat Dickson

Calloway School of Business and Accountancy, Wake Forest University

Box 7285 Reynolda Station, Winston-Salem, NC 27109-7285

Tel: 336-758-4629 E-mail: dicksoph@wfu.edu

**Abstract**

In seeking to exploit environmental resources and opportunities, CEOs can either set multiple goals or narrow their focus on a few targets for the organizations. What approach will help organizations to benefit more from industrial munificence? In this paper, we investigate the moderating effects of CEOs' goal setting (including the number of goals and the prioritization of these goals) on the relationship between industrial munificence and the satisfaction of goal attainment. By examining 277 small and medium-size firms in four countries, we find that CEOs need to stretch their goal list while keeping a clear priority order among these goals in order to capitalize on industrial munificence. Implications of our study are discussed.

**Keywords:** Goal Attainment, Industrial Munificence, Goal Complexity, Goal Diversity

## 1. Introduction

Individuals find themselves compelled to pursue several types of goals at the same time. As spouses, parents, children, teachers, researchers, and more, they seek to achieve a wide range of goals. Simon (1964: 7) observed that any action tends to serve several purposes and that it thus makes sense to "refer to the whole set of requirements as the (complex) goal of the action." Extending Simon's approach, a group of intertwined goals whose attainment requires similar actions can be referred to as a *goal type*. Even when related goals are grouped into goal types, one action can impact the attainment of multiple goal types. At the same time, the attainment of a single goal type can and generally does require many actions. Because of this many-to-many relationship among actions and goal types, actions undertaken to pursue one goal type can impede attainment of that goal type through feedback effects from other goals. For example, parents cannot simply put parental responsibilities above professional ambitions because neglecting professional goals can undermine their effectiveness as parents by decreasing their happiness and income. As any spouse, parent, child, teacher, and researcher can affirm, the balancing of goal types is challenging and too often stressful.

Organizations face an analogous challenge even when guided by effective leadership. Effective leadership provides direction, but organizations operate in complex environments that require more than guidance from above.

Success in a complex environment comes not just from one big thing done correctly but also from many small things done well. Organizations must increase sales but also generate profits. They must maintain or increase quality while holding down or cutting costs. Pursuit of different goal types generates stress for organizations as well as for individuals. Individuals can sometimes manage goal complexity by reducing the types of goals they seek to attain, for example, by focusing on their careers and choosing to delay or avoid marriage and parenthood. Organizations can also reduce complexity by eliminating or neglecting some types of goals, but they do so at the risk of decreasing organizational performance because of the interdependence among goals and the actions required to achieve them. Research suggests that pursuit of a single goal is not a viable strategy for organizations (Connolly, Conlon, & Deutsch, 1980; Simon, 1964). Research has also shown that organizations combining two types of goals - market orientations and entrepreneurial orientation - outperform organizations rating high on just one of these orientations (Atuahene-Gima & Ko, 2001; Covin & Slevin, 1989; Hart, 1992; Slater & Narver, 1995; Venkataraman, 1989).

Organization theories are divided in terms of the emphasis placed on the friction caused by pursuing multiple goal types. For some theories, this friction is negligible. For example, structural contingency theory asserts that fit between the organization and its environment enhances organizational performance. But what does fit mean in a complex environment that cannot be characterized in terms of a single or just a few environmental factors, such as uncertainty or technology? Because environments are generally complex, achieving fit requires the pursuit of several goal types, leading to internal friction. Organizational population ecology emphasizes variation among rather than within organizations. But variation within organizations in terms of the types of goals pursued may affect the performance of organizations and ultimately their survival. Other theories of organization incorporate more explicitly the pursuit of multiple goal types and the resulting friction. Stakeholder theory asserts that organizations must find a balance among different stakeholders with differing interests (Connolly et al., 1980). The need to offer rewarding experiences to employees, competitive returns to investors, innovative products and services to customers, and a myriad of contributions to these and other stakeholders or constituents suggests that organizations must pursue a variety of goal types. Theories of entrepreneurship and organizational learning direct attention to the friction between two types of conflicting goals: exploration of new opportunities and exploitation of existing strengths (March, 1991; Rothaermel & Deeds, 2004; Schumpeter, 1934). Solutions such as the ambidextrous organization offer ways of explicitly addressing conflict among these goal types, but they do not and cannot eliminate the inherent conflict between exploration and exploitation because of the different actions required by each. The exploration/exploitation framework provides only a limited view of goal type complexity because many goals cannot be clearly mapped to either exploration or exploitation. For example, is increasing profits tied to exploitation or exploration?

In general, there has been scant research related to the complexity of goal types. Goals have been examined extensively - mainly through the lens of expectancy, motivation, and the roles of principles and agents (Fred & Slowik, 2004; Lee & Schuler, 1980; Steers, 1976; Tubbs, 1986). Goals have been conceptualized in many different ways, for example, as objectives (Blau & McKinley, 1979; Krouse, 1972), evaluation criteria (Tansik, 1973), effectiveness criteria (Connolly et al., 1980; Hoy & Hellriegel, 1982), and aspiration levels (Lant, 1992). But these prior studies of goals and related constructs have generally focused on the effectiveness of specific goals or goal components in improving organizational performance. The complexity caused by the pursuit of multiple goal types has been largely ignored. Organizations may cope with goal type complexity by satisficing (Simon, 1964) rather than optimizing, but satisficing provides an incomplete picture of how organizations respond effectively to goal complexity. We seek to extend previous research by investigating the relationship between organizations' pursuit of multiple goal types – *goal type complexity* – and their success in attaining goal types. More specifically, we propose that the pursuit of multiple types of goals facilitates organizations' abilities to take advantage of the resources and opportunities available in their environments. We also propose that the more organizations reduce *goal type variability*, i.e. prioritize their goal types, the more effectively they are able to take advantage of environmental resources and opportunities. If pursuing multiple goal types and prioritizing these goal types facilitates organizations' exploitation of environmental resources and opportunities, then it is natural to ask whether the pursuit of multiple goal types is itself facilitated by reducing goal type variability; we explore this possibility as well.

In addition to extending research on organizational goals by developing and testing these specific mechanisms, we endeavor to make three more general contributions to the study of organizational goals. We would like to attract more attention to the promise that complexity theory holds for the study of organizational goals. We also hope to direct more attention to the importance of empirically analyzing organizational goals from an organizational as well as an individual perspective. Many if not most empirical studies of goals have focused on the effects of individual-level phenomena on organizational goals, e.g. goal ambiguity and specificity between principles and

agents or among different stakeholders (Austin & Klein, 1996; Fred & Slowik, 2004; Lee & Schuler, 1980; Locke & Latham, 1990, 2000; Steers, 1976; Tubbs, 1986), goal setting and motivation or satisfaction (House, 1971; Locke, 1968), or goals and employees' feelings of success and failure (Lewin, Dembo, Festinger, & Sears, 1994). There are also several empirical studies that view organizational goals through the lens of top management teams, e.g. by examining discrepancy in goals among top management team members (Blau & McKinley, 1979; Maclver, 1955). While concepts extrapolated from the individual level of analysis can inform the study of organizational goals, they can only go so far. As we have noted, pursuit of a single goal is arguably not a viable strategy for organizations in complex environments. While both individuals and organizations must cope with multiple goals, their mechanisms for doing so are different. The study of phenomena at the individual level informs but cannot replace the study of organizational-level mechanisms. We hope that our study encourages future empirical research on goals at the organizational level. Lastly, by examining goal types rather than specific goals and by examining organizations in four countries and seven industries, we attempt to provide insights that are not embedded in specific organizations, industries, or cultures.

We begin by reviewing the literature related to organizational goal types and elaborating upon our motivation for applying complexity theory to the investigation of organizational goal types. Building on previous research on industrial munificence and organizational performance, we then explain how goal type complexity may facilitate the exploitation of environmental opportunities in organizations' efforts to attain goal types; we present three hypotheses based upon mechanisms developed in our explanation. Next, we describe the field survey and the resulting data that we used to assess our hypotheses. We end by discussing our findings and their implications for both the study and management of organizations.

## 2. Theory

### *2.1 Organizational goal types*

While empirical studies on the subject have been rare, organizational goals - goals defined at the organizational-level - have consistently been a central element in organization theory (Bourgeois, 1985; Simon, 1964). The concept of the organizational goal has evolved over time, but most theoretical discussions of organizational goals have emphasized their "normative" and "evaluative" function (Connolly et al., 1980: 211). Organizational goals have most commonly been employed as criteria for assessing effectiveness (Hoy & Hellriegel, 1982). Conceptualized in this way, organizational goals are in essence benchmarks used to evaluate the effectiveness of organizational behaviors and attained outcomes (Tansik, 1973). Other conceptualizations such as the work motif (Blau & McKinley, 1979) or work objective (Krouse, 1972) also accentuate the normative function of organizational goals as "the intellectual ethos or prevailing set of ideas concerning what architecture is and what it should accomplish" (Blau & McKinley, 1979: 201-202). Simon (1964: 1) took the normative conceptualization of organizational goals one step further by representing them as "constraints" of organizational structure and behaviors (Simon, 1964: 1).

The challenge with a normative conceptualization of organizational goals lies in defining effectiveness criteria in a way that is not context-dependent. If organizations' goals are unique to their context, then comparing goals across organizations would be like comparing the volume of one building with the architectural style of another. To facilitate our empirical analysis, we therefore articulate an alternative although still normative conceptualization of goals. We define *organizational goal types* as an evoked set of satisficing or policy constraints, where particular satisficing levels or targets are continually updated through compromise and achievement (Krouse, 1972; Simon, 1964). Goal types are effectiveness criteria whose attainment requires performance of related actions. Our concept of organizational goal types includes such effectiveness criteria as increasing sales, improving profit, and speeding cash flow.

As criteria for evaluating organizational performance and guides for organizational behaviors, organizational goal types must balance the conflicting interests of different types of stakeholders (Bourgeois, 1980, 1985; Connolly et al., 1980). Short-term and long-term goals need to be balanced (Blau and McKinley 1979). Cost and benefits need to be weighed (Bailey & Malone, 1970), and both individual desires and organizational needs must be reconciled (House, 1971; Locke, 1996). As a result, no organizational systems are observed to employ only a single criterion to guide organizational behaviors in the context of market competition (Connolly et al., 1980). In adapting to complex environments, organizations develop complex visions and structures that are reflected in their goals (Blau & McKinley, 1979). Multiple organizational goals are necessary for each organization – even organizations that consist of relatively simple systems (Connolly et al., 1986). While there is variation from organization to organization in goal types as well as in goals, there are some common goal types that must be satisfied in order for organizations to achieve a satisfactory performance. For example, Cyert and March (1963) identified the following domains as consistently important: production, sales, inventory, market share, and profit.

When organizations pursue multiple types of goals, the complexity and the structure of these goals become important considerations.

*2.2 The complexity of organizational goals*

Complexity theory as applied to organizations portrays an organization as a dynamic system of adaptation and evolution that contains multiple, interacting parts (Morel & Ramanujam, 1999; Simon, 1996). The complexity in organizational systems is often conceptualized in terms of how differentiated their structures are or how numerous their tasks are (Blau & McKinley, 1979). Of particular interest to complexity researchers who study organizations is the relationship between organizational performance and the complexity of distinct activities and subsystems within organizations (Anderson, 1999; Ashmos, 1996, 2000; Boisot & Child, 1999; Daft, 1992). The rationale behind organizational complexity theory is that the more complex an organization is, the more potential options the organization has and thus the more flexible it is. A complex organizational structure facilitates effective responses to a complex environment (Blau & McKinley, 1979; Evan, 1966; Kimberly, 1975; Lawrence & Lorsch, 1967; Perrow 1961).

The value of applying a complexity perspective to the study of goals is apparent in the observation that it is doubtful whether in real organizations decisions are generally directed toward achieving a single criterion. "It is easier, and clearer, to view decisions as being concerned with discovering courses of action that satisfy a whole set of constraints" (Simon, 1964: 20). Different goal types serve different purposes (Cyert & March, 1963). For example, besides the profit maximization goal, firms need to achieve a reasonable amount of sales and a good rate of sales growth in order to sustain profitability (Higgins, 1977). Similarly, a certain degree of attainment of four goals - absolute sales, sales growth, cumulative cash flow, and profitability – has been found to be crucial in competition among small-to-medium sized enterprises (Boag, 1987). When an organization pursues multiple goal types, it is able to build a more comprehensive picture of the environment, which is then rewarded in the market (Settecase Ernst & Young LLP, 1999).

The complexity of organizational goal types is reflected in both the number of and the interdependence among organizational goal types applied by the organization. We define *goal type complexity* as the number of organizational goal types emphasized by an organization. Our definition of goal type complexity omits interdependence among goal types because of the intractability of studying such interdependence and because prior research on organizational complexity has defined it in terms of the number of organizational elements (Boisot & Child, 1999, Morel & Ramanujam, 1999). Multiple goal types increase complexity and provide organizations with broader representations of their environments and of their relationships with other organizations. Like open-mindedness in individuals, these broader representations help organizations remain open to a broader range of environmental possibilities (Bourgeois, 1985). A greater number of goal types enables organizations to be more receptive to market possibilities. It also facilitates the balancing of conflicting goals, e.g. conflicting interests among various stakeholders or the conflicting objectives of exploration and exploitation. Professional organizations need to have multiple objectives that reflect the values and interests of the professions (Maclver, 1955). *Goal type variability* relates to prioritization among goal types or diversity in the importance rankings that organizations attach to different goal types. For instance, when an organization does not prioritize its goal types, it faces greater goal variability because organizational decision-making is more difficult when goal types are deemed equally important. In contrast, when there is a clear priority among organizational goal types, decision-making is easier, and there is less ambiguity in the sequence of actions required for goal attainment.

*2.3 Industrial munificence and organizational goal types*

The relationship between organizations and external environments has received considerable attention in organization theory (Covin & Slevin, 1989; Miller & Friesen, 1983; Zahra, 1993). Along with other environmental factors such as uncertainty, instability, and hostility, the concept of industrial munificence has played a fundamental role in understanding the relationship between environmental conditions and the strategic decision-making process that occurs within organizations (Lumpkin & Dess, 2001; Zahra & Covin, 1995). *Industrial munificence* refers to the availability of resources and the number of external opportunities that are present in a specific environmental setting (Dess & Beard, 1984; Zahra, 1993). The plentiful resources and opportunities afforded to organizations in munificent environments tend to allow these organizations to enjoy heightened levels of competitive success when exploiting current business strengths (Castrogiovanni, 1991). As a result, a more proactive and risky strategic orientation can be adopted, which in turn encourages exploration of new market opportunities (Baird & Thomas, 1985; Lumpkin & Dess, 1996; Schafer, 1990).

A critical characteristic of organizations' contexts, industrial munificence is manifested in organizations' abilities to attain their goals (Dess & Beard, 1984; Pfeffer & Salancik, 1978; Randolph & Dess, 1984; Staw & Szwajkowski,

1975; Tushman & Anderson, 1986). Two different views of munificence have emerged. One perspective, environmental determinism, portrays the environment as an outside set of conditions to which organizations must adapt (Aldrich, 1979; Hannan & Freeman, 1977). The other perspective, strategic choice, portrays the environment as a reality that organizations create via the selection of their perceptions (Child, 1972; Starbuck, 1976; Weick, 1979). This study follows a middle path between these two views by integrating an important strategic tool, organizational goals, into the relationship between environments and organizational performance. Our key assertion is that while the level of industrial munificence may serve as a defining contextual factor for organizations, especially for smaller organizations (Atherton, 2003), goal type complexity facilitates the process by which organizations recognize and utilize the support afforded them by environmental conditions and thereby helps them to attain their goals.

Munificent environments have been found to support organizations' growth and performance (Gelderen, Frese, and Thurik, 2000; Dollinger & Golden, 1992). The greater the level of industrial munificence, the more opportunities the environment provides and therefore the easier it is for organizations to survive and prosper (Castrogiovanni, 1991). Applying the concept to small-to-medium sized enterprises, Dubini (1988) characterized a munificent environment as having: an economy that is diversified in terms of the sizes of companies and the industries represented, an infrastructure that is rich in skilled human resources, a financial community that is solid, and government incentives that support the creation and development of new businesses. Similarly, Gnyawali and Fogel (1994) emphasized the socio-economic dimension of a munificent environment and linked this dimension to the availability of assistance and support services that facilitate the entrepreneurial process. Korunka et al. (2003) split industrial resources into two categories: micro-social (e.g. family restrictions, support) and macro-social (e.g. social networks based on earlier occupational experience), both of which support entrepreneurs' goal attainment. Although there are differences, a common theme in these conceptualizations of industrial munificence is that it is generally easier in munificent environments for organizations to take advantage of external resources to realize their goals.

We hypothesize that an appropriate level of goal type complexity facilitates organizations' ability to exploit environmental resources to attain their goals. A greater number of goal types means that organizations are willing and able to acknowledge and balance the interests of multiple stakeholders and to maintain alertness toward direct and indirect environmental factors (Blau & McKinley, 1979; Maclver, 1955). In exploiting industrial munificence, organizations with such alertness face problems directly and search for the best way to solve them (Hoy & Hellriegel, 1982). A munificent environment presents opportunities that alert organizations are better able to recognize and exploit than are organizations with a narrower goal focus. Research on organizational goals has found that by maintaining multiple goals to satisfy a variety of constituencies, organizations are able to perceive their environments more accurately (Bourgeois, 1985). A clearer vision of the environment enables a more complete search for opportunities within an industry (Sutcliffe, 1994). Setting up multiple, conflicting goal types implies that an organization is willing to evaluate its situation and to consider several alternatives for both the present and the future (Brown & Eisenhardt, 1997). Thus, the greater the number of goal types an organization pursues, the more successful the organization is in exploiting environmental resources to attain its goals:

*Hypothesis 1: Goal type complexity positively moderates the impact of industrial munificence on goal attainment.*

While more goal types help organizations detect more opportunities in their industries and thereby reap more benefits from industrial munificence (Bourgeois, 1985; Brown & Eisenhardt, 1997), pursuing too many goal types could cause organizations to lose focus (Evan, 1976; Yuchtman & Seashore, 1967). When organizations engage in a broad search in exploring environmental opportunities, a clear priority among rules and actions makes exploration more efficient (Krouse, 1972). The degree to which organizations have a specific focus or goal type prioritization is reflected in the variability of the importance ascribed to goal types. Research on the goals of top management teams has applied a similar logic. While acknowledging that management team members must maintain a sufficient number of goal types in order to represent the interests of various constituencies (Bourgeois, 1985), scholars have also suggested that a certain congruence and prioritization among these goal types must be achieved in order for the goal types to be attained efficiently (Bourgeois, 1980; Child, 1974). Bailey and Malone (1970) found adverse consequences from focusing on either profit or sales (output) maximization. Focus on profit-maximization resulted in overcapitalization behaviors. Focus on sales or output maximization produced undercapitalization behaviors. However, placing equal emphasis on both goals was deemed problematic as well because of the confusion that it caused employees and its ambiguity in directing employees' activities.

While maintaining more organizational goal types benefits organizations by enhancing their alertness to environmental opportunities and their ability to exploit environmental resources, organizing or structuring goal types provides additional benefits. As we have indicated, the interdependences and interactions among goal types and

the actions that they require can be very complex. Goal type prioritization is a rough but simple measure of how well an organization structures or organizes its goal types. By establishing priorities among goal types, organizations lower variability. To the extent that organizations neglect to prioritize goal types, variability increases. Variability is maximized when organizations fail to distinguish among goals types in terms of their importance. While goal type complexity makes organizations more adaptive and thereby facilitates exploitation of industrial munificence, variability undermines exploitation by making organizations indecisive and pulling them in opposing directions at the same time:

*Hypothesis 2: Goal type variability negatively moderates the impact of industrial munificence on goal attainment.*

There is a potential internal conflict in our hypotheses regarding goal type complexity and variability. We asserted that the number of goal types – complexity – positively moderated the impact of munificence on goal type attainment, while goal type variability – the lack of prioritization – is a negative moderator. But if greater diversity in the form of more goal types has a positive effect, then why does greater diversity in the form of variability not have a positive impact also? This tug-of-war between diversity and focus has been a consistent theme in the study of organizational goals. Favoring focus, Child (1979) assumed that the less dispersed top management objectives were, the more successful the organization would be in attaining them. Bourgeois' (1980) empirical studies supported Child's assertion, which Bourgeois (1985) labeled "the value of consensus." The congruence of top managers' objectives is crucial in order to reduce intra-organizational politics and transaction costs associated with negotiation and coordination (Child, 1979). Favoring diversity, Simon (1964) asserted that organizations should pursue multiple goal types at the same time. According to Cyert and March (1963), success comes when all goal types are satisfied. The benefit of multiple goal types is that different goal types together suggest a complete picture of reality, and these diverse views encourage an innovative spirit, which helps organizations locate and make use of both the apparent and the hidden, under-exploited opportunities in their environments (Blau & McKinley, 1985). In later research, Bourgeois (1985: 568) – who favored focus – argued for a type of diversity in suggesting that the members of an organization's top management team should "focus on sufficiently different aspects of the environment so that their perceptions will not be homogeneous and they will maintain different goal sets adequately representing the organization's various constituencies."

We seek to resolve the potential conflict between focus and diversity in goal types by proposing a relationship between focus and diversity. Focus facilitates the exploitation of diversity. More specifically, the number of goal types is an even stronger moderator of the impact of munificence on goal type attainment when organizations order goal types by importance. We thus propose a three-way moderation: goal type variability moderates the moderating effect of goal type complexity on the relationship between the industrial munificence and goal attainment. Lower variability (prioritization) makes it easier for organizations to pursue multiple goal types simultaneously and yet efficiently. For a given number of goal types, emphasizing some goal types over others reduces negotiation and coordination efforts and thereby facilitates the identification and distribution of environmental resources (Bourgeois, 1980; Child, 1974) – as is suggested by the "the value of consensus" (Bourgeois, 1985). When organizational goal types are prioritized, the positive moderation effect of goal complexity on the relationship between industrial munificence and goal attainment is stronger.

*Hypothesis 3: The goal variability negatively moderates the moderation effect of goal complexity on the relationship between industrial munificence and goal attainment.*

Figure 1. summarizes the hypothesized relationships among industrial munificence, goal type complexity, goal type variability, and goal attainment. (See Figure 1)

## 3. Methodology

### *3.1 Data Collection and Sample*

We chose to test our hypotheses using small-to-medium sized enterprises in order to reduce the impact of factors extraneous to our model. Large organizations are able to influence or enact their environments. Our study required that we be able to treat the environment as exogenous to organizations. We collected both primary and secondary data for our analyses. Our primary data came from a larger survey of a stratified random sample of companies in four countries: Australia, Sweden, Mexico, and the Netherlands. We used national databases, trade association membership lists, and business directories to construct our sample. The small-to-medium sized enterprises in our sample were in fourteen industries (i.e. food, wood, printing, rubber, chemicals, machine manufacturing, electronics products, transportation, programming, textile, services, construction, oil and gas, and other). Our primary data were collected using a pragmatic combination of questionnaires and on-site interviews. In Mexico, structured interviews were used due to the unreliability of the postal service; a two-wave mailing process was used in the other countries. Surveys were sent to 1,873 organizations believed to be small-to-medium sized

enterprises: 973 in Australia, 600 in Sweden, and 300 in the Netherlands. A modified on-site interview process was conducted in Mexico (650 organizations). The survey was formulated in English and then translated into the appropriate language. We confirmed the accuracy of translations using a double back-translation process (Brislin, 1980) and pilot tests. The study participants were decision makers - owners or general managers – of their companies.

We obtained a total of 880 responses. The mailing process resulted in 206 (21.2%) returned surveys from Australia, 180 (30.0%) from Sweden, and 131 (43.7%) from Norway. The on-site interviews in Mexico yielded 363 (55.8%) completed surveys. The overall response rate was 34.9% (880/2523). Consistent with the European (European Observatory for SMEs, 1995) and American (US Government Printing Office 1995) definitions of small-to-medium sized enterprises, we constrained the firm size in our sample to between 5 and 500 employees (Steensma et al., 2000). After removing the organizations with fewer than 5 and more than 500 employees, 654 small-to-medium sized enterprises remained.

We used archival data to calculate industrial munificence. Consistent with previous studies (Dess & Beard, 1984; Palmer & Wiseman, 1999), our archival data included industrial indices such as output, employees, value-added, and the number of establishments for the past five years ending in 1998. However, an examination of the available archival datasets revealed that different countries employed different industry codes between 1994 and 1998. After reviewing several potential sources, we determined that the *Structural Statistics* database provided the best fit for the analysis because it yielded the greatest number of consistent industry classifications, including food, wood, printing, rubber, chemicals, machine manufacturing, and electronics. While limiting the sample to these seven manufacturing industries could have reduced the range of munificence in our study, Mizik and Jacobson (2003) found that these seven industries have a broad range of uncertainty, including low industrial uncertainty (i.e., food and wood), moderate industrial uncertainty (i.e., chemicals, machine manufacturing, and rubber), and high industrial uncertainty (i.e., electronics). Narrowing our sample to these seven industries decreased the number of usable responses to 331.

Listwise deletion of firms with missing data resulted in a final sample of 227 firms, consisting of 26 Australian, 84 Swedish, 77 Mexican, and 40 Dutch firms. A comparatively larger proportion of organizations (23.8%) came from the machine manufacturing industry. The proportions of the sample accounted for by other industries were as follows: food (21.6%), printing (15.0%), wood (12.3%), electronics (11.0%), rubber (9.3%), and chemicals (7.0%). Table 1 lists the industry breakdown for each country, as well as for the total sample utilized in this study. (See Table 1)

We tested for non-response bias in each country by contacting a sub-sample of companies whose key decision makers did not return the surveys - or declined interviews in Mexico – in order to test whether these companies were significantly different from the companies in our final sample in terms of demographic measures such as firm size, industry, etc. No bias was detected. Because of the substantial reduction in sample size due to size constraints and missing data, we also conducted two one-way ANOVA analyses to test for bias. The first ANOVA assessed whether there were significant differences between the final sample and the cases excluded for size; the second ANOVA assessed whether there were significant differences in the final sample and the cases deleted due to missing-values. We identified no systematic bias in either test.

### *3.2 Measures*

#### 3.2.1 Goal type complexity**.**

Empirical analysis applying a complexity perspective generally employs a reductionistic approach. The unit in such analyses is organizational structures or business processes. Complexity is then operationalized as the number of structures or processes involved in organizational dynamics (Boisot & Child, 1999). Burton and Forsyth (1986) identified 14 elements to measure complexity. These elements included the number of product categories, the number of products, and the number of countries in which operations were conducted. Even as computing power has increased, i.e. personal computers have become more powerful, complexity has still been coded as the number of elements, the degree to which a task was programmed, or the number of exceptions (Morel & Ramanujam, 1999).

Consistent with prior empirical studies applying a complexity perspective, we measured goal type complexity as the number of goal types that are important to organizations. Specifically, we asked CEOs to evaluate the importance to their organization of the following strategic goal types: sales level ($), sales growth rate, cash flow, gross profit, net profit from operations, return on investment (ROI), and the ability to fund business growth from profit. All items were scored on 5-point Likert scales. We identified the goal types rated at the highest level of importance ("5") as the goal types that were most influential in organizational behaviors and outcomes. Our rationale for this measure was that only the most important goal types would be consistently employed in decision-making and

pursued (Blau & McKinley, 1979). A more pragmatic explanation for our measure is that without a cut-off value for importance, we would have had no variance in the number of goal types across organizations because respondents selected from a predetermined list of seven goal types.

3.2.2 Goal type variability

The standard deviation is the most commonly used measure of spread and variation in data (Bourgeois, 1985; Weiss, 2004). Bourgeois (1985) used the standard deviation to measure the goal diversity among top management team members. Consistent with Bourgeois (1985), we used the standard deviation in importance rating of the seven goal types to assess the prioritization or variability of organizational goal types. Our operationalization – based on the standard deviation – is inversely related to our theoretical construct of goal type variability. That is, the smaller the standard deviation (which indicates all seven goal types are rated similarly in importance), the more complicated the goal system and the higher the goal variability. For example, if an organization attaches an equal weight to each goal type, its goal type structure would be the most complicated, and the standard deviation would be zero. If an organization prioritizes goal types by attaching different ratings of importance to different goal types, the standard deviation would be higher, and the goal variability would be lower. We calculated our variability measure by subtracting the standard deviation from a constant so that the measure's direction would be consistent with our theoretical construct of goal type variability.

An alternative way to operationlize our variability measures would have been to use the composite measure developed by Tosi et al. (1971). However, we deemed the composite measure inappropriate for operationalizing our concept of goal type variability because it includes the mean as the denominator. As a result, organizational elements with the same goal type variability but different means would have different values. Because our conceptualization of goal type variability focuses strictly on the variance in the organizational goal type itself, adjusting the variance based on the variable mean would not be consistent with our conceptualization. For example, organization A might assign all five goal types an importance rating of 3 (on a Likert scale of 1 "not important at all" to 5 "very important"), and organization B may assign them all an importance rating of 5. Even though the mean levels for organization A and B are different, the resources would in principle be allocated equally across the five goals in both cases. Therefore, their goal type variability is the same, and the organizations' measures of goal type variability should also be equal. Our operationalization yields the same result for both; a composite measure would not.

3.2.3 Objective industrial munificence

Following Dess and Beard (1984) and Palmer and Wiseman (1999), we measured objective industrial munificence by regressing industrial sales, total industrial employment, and industrial value-added for each industry for the five years prior to the year of the survey. Munificence was calculated using a ratio of the regression slope coefficients (B) to the mean value of the dependent variables. Consistent with Sutcliffe (1994), the final munificence measure was expressed as the arithmetic average of the three ratios.

3.2.4 Goal type attainment

For the dependent variable in our analyses, we employed a subjective measure of goal type attainment based on seven items that required managers to evaluate the degree to which they were satisfied with their company's performance in terms of seven criteria: sales level ($), sales growth rate, cash flow, gross profit, net profit from operations, return on investment (ROI), and the ability to fund business growth from profit. All responses were to 5-point Likert scales ranging from "not satisfied at all" to "highly satisfied." Rather than weighting each type equally, we used each CEO's importance rating for each goal type as a weight. That is, we weighted the attainment responses for each goal type by multiplying each response by the corresponding importance rating, and we then averaged these products to generate our measure of goal type attainment. Weighting goal types by their importance is critical to the validity of our measure because different organizations emphasize different goal types, and a measure of goal type attainment needs to reflect this variance.

We chose to employ subjective rather than objective measures of goal attainment in our study for several reasons. Absolute scores on financial performance criteria are affected by industrial-related and country factors (Miller & Toulouse, 1986). Directly comparing objective measures across industries and countries can thus be misleading (Covin & Slevin, 1989). Subjective measures are presumably less susceptible to distortions from inter-industry differences. In addition, respondents - for a variety of reasons such as taxes, business secrets, or social desirability – cannot or will not provide the desired organization-level performance information (Fiorito & LaForge, 1986). For this reason, subjective performance measures may yield more complete data (Covin & Slevin, 1989). Furthermore, objective financial data for many firms, especially smaller and privately held firms, are simply not publicly available, and this problem is compounded in cross-national studies.

*3.3 Control variables*

3.3.1 External environment

Consistent with prior research (Dess & Beard, 1984; Palmer & Wiseman, 1999) and in order to control for other elements of environmental uncertainty, we included environmental instability (Miller & Friesen, 1983) and environmental complexity (Downey & Slocum, 1975) as control variables. *Environmental instability* reflects the rate of change in the environment (Miller & Friesen, 1983). We operationalized it as the mean of the ratios of the standard errors of the three regressions used to measure munificence to the mean value of the dependent variables. *Environmental complexity* represents the competitive intensity in each industry (Downey & Slocum, 1975). Our objective environmental complexity measure was obtained by counting the number of the industrial establishments as the proxy of the number of industrial competitors (Palmer & Wiseman, 1999). These additional environmental controls allowed us to account for potential industry effects across countries. We found high correlations between the two environmental variables and the country dummies and industry dummies (VIF varied from 4 to 14); these correlations were not surprising because industrial conditions vary systematically across industries and across countries. Therefore, we included only the two environmental variables as controls because these two measures summarized the information of three country dummies and six industry dummies and, therefore, provided more statistical power.

3.3.2 Firm size

Previous research has argued that smaller firms tend to be at a resource disadvantage compared to their larger counterparts (Calof, 1993). Therefore, we controlled for *firm size*, as measured by the number of employees, to account for each firm's resource sufficiency and economies of scale.

3.3.3 Internationalization

Companies that engage in international trade are less likely to be constrained by the industrial munificence in their home countries. We gauged each company's level of internationalization by asking the percentage of the company's current sales revenue that came from outside of the home country. This variable was included to account for international effects.

3.3.4 Entrepreneurial orientation

Our last control was *entrepreneurial orientation*, which has consistently appeared in research on smaller organizations (Tan & Litschert, 1994; Venkatraman, 1989). Entrepreneurial orientation gauges the strategic posture of organizations; differences in strategic posture may affect attainment of organizational goal types. In accordance with previous research, we applied the established measure of entrepreneurial orientation developed by Miller (1983) and later revised by Covin and Covin (1990), which emphasizes aggressive product-market innovations, risky projects, and a proclivity to pioneer innovations that preempt the competition. We verified the measure's dimensionality using confirmatory factor analysis (LISREL 8.7). The model fitness in terms of GFI, CFI, and NFI was above 0.90, indicating an acceptable measurement model. The reliability of the entrepreneurial orientation measure in our study was 0.78.

**4. Analysis**

The statistical analyses in our study were divided into three stages. First, we tested the direct impacts of goal type complexity, goal type variability, and industrial munificence on organizational performance (see Model 2 in Table 3). We then included two interaction items (see Model 3 in Table 3): 1) the interaction of goal type complexity and industrial munificence and 2) the interaction of goal type variability and industrial munificence. Finally, we included a three-way interaction item - the interaction of industrial munificence, goal type complexity, and goal type variability - to gauge the moderating effect of goal type variability on the moderating effect of goal type complexity (see Model 4 in Table 3).

Different from previous complexity studies (Burton and Forsyth 1986; Morel and Ramanujam 1999) or goal studies (Blau and McKinley 1979; Bourgeois 1985) which focused only on the number of organizational elements or the content of organizational goals, we examined the effects of both goal type complexity and goal type variability in the same organizational-level model. Even though the number of goal types does not have a linear relationship with the variability as measured by standard deviation, there might still be highly-correlated items that create problems. To prevent such problems, we applied the following two methods in our study. First, we examined the hypothesized effects by including measures for both goal type complexity and goal type variability in the same model. We then included each measure separately in other models in order to see whether the correlation between goal type complexity and goal type variability would change the results. Second, we used mean centered interaction items to decrease the multicollinearity among the interaction items and the main-effect variables (Aiken

& Stephen, 1991; Jaccard, Turrisi, & Choi, 1990).

**5. Results**

The means, standard deviations, and the correlations of the variables employed in our analyses are listed in Table 2. Our goal type complexity measure was positively and significantly related to the firm size while the goal type variability measure was not. This may indicate that the larger organizations are, the more goals they pursue. The observed relationship between firm size and goal type complexity may indicate an interesting direction for future research. (See Table 2)

Objective munificence and both goal type complexity and goal type variability are included as independent variables in Model 2 (Table 3). The archival measure of the industrial munificence, in accordance with previous research on organizational performance, positively and significantly related to goal type attainment ($\beta = .18$, $p < .05$, two-tailed test). Goal type complexity had a significantly positive impact on goal type attainment ($\beta = .42$, $p < .001$, two-tailed test), suggesting pursuit of multiple goal types supports attainment of goal types. However, goal type variability was not significantly related to goal type attainment ($\beta = .08$, $p > .05$, two-tailed test), suggesting that prioritization of organizational goal types has no direct impact on goal type attainment.

To test H1 and H2, we added two interaction items into the model (see Model 3 in Table 3); these items gauge the moderation effects of goal type complexity and goal type variability on the relationship between industrial munificence and goal type attainment. As shown in Model 3, the interaction item of industrial munificence and goal type complexity had a positive impact on the relationship between industrial munificence and goal type attainment ($\beta = .14$, $p < .05$, two-tailed test), which indicated that the more goal types an organization emphasized, the better it was be able to attain desired goal types. Therefore, H1 was supported. The interaction of industrial munificence and goal type variability had an even stronger moderating impact on the relationship between industrial munificence and goal type attainment ($\beta = -.50$, $p < .001$, two-tailed test), supporting H2. By prioritizing goal types, organizations were better able to utilize industrial resources in achieving organizational goal types. To further explore the effect of goal type variability on goal type attainment, we conducted an additional regression analysis in which we included a three-way interaction of industrial munificence, goal type complexity, and goal type variability. This three-way moderation was not significant ($\beta = -.11$, $p > .05$, two-tailed test) although the sign of the regression coefficient was in the right direction (see Model 4 in Table 3). Therefore, H3 was not supported.

Although the collinearity between goal type complexity and goal type variability was not substantial (VIF < 2), we nonetheless tested H1 and H2 in separate models as well, one with goal type complexity but not goal type variability, and the other with goal type variability but not goal type complexity. The results confirmed the above findings. Both goal type complexity and goal type variability significantly and positively moderated the relationship between industrial munificence and goal attainment. In adding the three-way interaction item without the two-way interaction items, we again found no significant relationship between goal type variability and goal type attainment. These supplemental analyses confirmed the results shown in Table 3.

**6. Limitations**

As with any study, our findings are subject to both empirical and theoretical limitations and should be interpreted in light of these limitations. We employed a survey methodology that may be subject to common methods variance. In order to address this potential problem, we employed archival uncertainty measures from a different data source. In addition, we conducted Harmon's one factor test (Podsakoff & Organ, 1986). The items that were used to measure both dependent and independent variables were entered into one exploratory factor analysis. In analyzing the covariance matrix, we found that the first factor accounted for only 16% of the total variance, which suggested that no single factor accounted for the majority of covariance; therefore, common method variance is not solely responsible for our findings. Moreover, items from both endogenous and exogenous variables tended to load on different factors. Thus, common method bias would not explain many interactive relationships between the predictor and outcome variables. A second limitation is that the missing primary and archival data significantly reduced the response rate in terms of useable surveys. While this could have biased the results, statistical comparisons revealed no significant differences in key variables between organizations included in our study and those eliminated due to missing data.

More subtle but no less important are the theoretical limitations of our study. To make possible comparison of goals across organizations, industries, and countries, we focused on goal types rather than goals. However, since the goal type is a relatively novel construct, we had to base much of our discussion on the existing literature that is focused on goals. Goal and goal type are two closely related but subtly different concepts. More research is needed to delineate fully the differences between goal and goal types, but such research will have to overcome the challenge inherent in the idiosyncratic nature of organizational goals. A related issue that is both theoretical and

empirical is that we identified seven goal types *a priori* and requested managers to respond in terms of these seven types. Perhaps there are more types. Perhaps some of our seven should not have been included. Our intention was to select a reasonable and representative set of organizational goal types and to determine what impact, if any, the complexity and variability of these types had on goal attainment. Our seven goal types are at a minimum a reasonable extension of those identified by Cyert and March (1963), but future research using other sets of goal types is needed to confirm the robustness of our findings.

**7. Implications and Conclusions**

It might seem that organizations would be more successful in attaining their goals if they winnowed their list of goals. Managers could then focus their resources and efforts on achieving their short list of goals. There is certainly a good deal of face validity in the argument that pursuing multiple goals makes goal attainment more difficult. Jack Welch achieved much success as CEO of General Electric while commanding his managers to be number one or two in each market or to divest the business unit. Welch's mantra is consistent with a very narrow focus on just one type of goal, i.e. market share. Organizations have limited resources and are bounded rationality. Pursuit of multiple goals taxes both the resources and rationality that organizations can bring to bear. Perhaps focusing limited resources and managerial capabilities on one goal type, such as market share, yields the best results. But organizations have several types of shareholders, each with different needs (Blau & McKinley, 1979; Maclver, 1955). Organizations must interact with their environments in their pursuit of goals, and forces in their environments, especially competitive pressures, push them in several different directions at once (Bourgeois, 1985; Brown & Eisenhardt, 1997). Interdependence among goals also makes it difficult for organizations to narrow their goals because attainment of one goal might require pursuit of other goals as well, and there may be economies of scope in pursuing related goals. Organizations are thus compelled by stakeholders, environmental pressures, and goal interdependence to pursue several types of goals at the same time. The popularity of Kaplan and Norton's (1996) "balanced scorecard" would seem to confirm that managers believe their organizations must pursue several goals at the same time in order to succeed. But should managers try to maintain a balanced scorecard or should they follow Welch's example of laser-like goal focus?

Although our study does not conclusively resolve the conflict between diversity and focus of organizational goals, it does provide new insight into when and how organizations should pursue multiple goals. While industrial munificence is critical for organizations - especially smaller organizations - to survive and prosper (Dubini, 1988; Gnyawali & Fogel, 1994; Korunka et al., 2003), our study suggests that organizations are better able to exploit munificence when they prioritize goals and strategies (Child, 1972; Starbuck, 1976; Weick, 1979). While there are almost certainly other mechanisms involved, especially for large organizations, we found evidence that smaller organizations are better able to take advantage of the resources and opportunities in their environments when they place high importance on multiple goal types. Differentiating among goal types in terms of their importance, i.e. prioritization or low variability, appears to have a similar, positive effect on exploitation of resources and opportunities. These findings seem to imply that prioritization or low variability among goal types would enhance the positive effect that comes with placing high importance on multiple goal types, but we were not able to confirm this conjecture in the form of a three-way interaction effect. Our results suggest that the effect might be detectable in a larger sample, but we suspect that better operationalizations of goal type complexity and variability might be required. Future research is needed to explore in more detail the relationship between prioritization and complexity of goals. The final answer will probably not be *whether* a balanced scorecard or "Neutron Jack's" advice is better but *when* or *under what conditions* each approach yields the best results.

**References**

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, Calif.: Sage Publications

Aldrich, H. (1979). *Organizations and environments*. Englewood cliffs, NJ: Prentice Hall.

Anderson, P. (1999). Complexity theory and organizational science. *Organization Science* 10(3): 216-232

Ashmos, D.P., Duchon, D., Hauge, F. E., & McDaniel, R. R. Jr. (1996). Internal complexity and environmental sensitivity in hospitals. *Hospital & Health Services Administration* 41(4): 535-555

Ashmos, D. P., Duchon, D., & McDaniel, R. R. Jr. (2000). Organizational responses to complexity: The effect on organizational performance'. *Journal of Organizational Change Management* 13(6): 577-594

Atherton, A. (2003). The uncertainty of knowing: An analysis of the nature of knowledge in a small business context. *Human Relations* 56(1): 1379-1398

Atuahene-Gima, K., & Ko, A. (2001). An empirical investigation of the effect of market orientation and

entrepreneurship orientation alignment on product innovation. *Organization Science* 12(1): 54-74.

Austin, J. T., & Klein, H. J. (1996). Work motivation and goal striving. In K. R. Murphy (Ed.), Individual Differences and Behavior in Organizations: 209-257. San Francisco: Jossey-Bass.

Bailey, E. E., & Malone, J. C. (1970). Resource allocation and the regulated firm. *Bell Journal of Economics and Management Science* 1: 129-142

Baird, I. S., & Thomas, H. (1985). Toward a contingency model of strategic risk taking. *Academy of Management Review* 10: 230-243.

Blau, J. R., & McKinley, W. (1979). Ideas, complexity, and innovation. *Administrative Science Quarterly* 24: 200-219

Brislin, R. W. (1980). Translation and content analysis of oral and written materials. In H. Triandis & J. Berry (Eds.), *Handbook of Cross-Cultural Psychology*, Vol. 2, 389-444. Boston: Allyn and Bacon.

Brown, S. L, & Eisenhardt, K. M (1997). The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations. *Administrative Science Quarterly* 42: 1-34

Boag, D. A. (1987). Marketing Control and Performance in Early-Growth Companies. *Journal of Business Venturing* 2(4): 365-379

Boisot, M., & Child, J. (1999). Organizations as adaptive systems in complex environments: The case of China. *Organization Science* 10(3): 237-253

Bourgeois, L. J. III (1981). On the measurement of organizational slack. *Academy of Management Review* 6(1): 29-39

Bourgeois, L. J. III (1985). Strategic goals, perceived uncertainty, and economic performance in volatile environments. *Academy of Management Journal* 28(3): 548-573

Burton, R. M., & Forsyth, J. D. (1986). Variety and the firm's performance: An empirical investigation. *Technovation* 5: 9-21

Calof, J. L. (1993). The impact of size on internationalization. *Journal of Small Business Management* 31(4): 60-69.

Castrogiovanni, G.J. (1991). Environmental Munificence: A Theoretical Assessment. *Academy of Management Review* 16(3): 542-565

Child, J. (1972). Organizational structure, environment, and performance: The role of strategic choice. *Sociology* 6: 1-22

Connolly, T., Conlon, E. J., & Deutsch, S. J. (1980). Organizational effectiveness: A multiple-constituency approach. *Academy of Management Review* 5(2): 211-217

Covin, J. G., & Covin, T. J. (1990). Competitive aggressiveness, environmental context, and small firm performance. *Entrepreneurship: Theory and Practice* 14(4): 35-50

Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal* 10: 75-87.

Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Prentice-Hall. Englewood. Cliffs. NJ.

Daft, R. L. (1992) *Organization theory and design*. (4th ed.). West Publishing, St. Paul, MN.

Dess, G.D., & Beard, D. W. (1984). Dimensions of organizational task environments. *Administrative Science Quarterly* 30: 52-73.

Dollinger, M. J., & Golden, P. A. (1992). Interorganizational and Collective Strategies in Small Firms: Environmental Effects and Performance. *Journal of Management* 18(4): 695-716

Downey, H. K., & Slocum, J. W. (1975). Uncertainty: Measures, Research, and Sources of Variation. *Academy of Management Journal* 18(3): 562-578

Dubini, P. (1988). The influence of motivations and environment on business startups: some hints for public policies. *Journal of Business Venturing* 4(1): 11-26

Evan, W. M. (1966). The organization-set: Toward a theory of interorganizational relations. In James D. Thompson (ed.), *Approaches to Organizational Design*: 175-191. Pittsburgh: University Press.

Fiorito, S. S., & LaForge, R. W. (1986). A marketing strategy analysis of small retails. *American Journal of Small Business*, 10(4): 7-17.

Fried, Y., & Slowik, L. H. (2004). Enriching goal – setting theory with time: An integrated approach. *Academy of Management Review* 29(3): 404-422

Gelderen, M. V., Frese, M., & Thurik, R. (2000). Strategies, uncertainty and performance of small business startups. *Small Business Economics* 15(3): 165-181

Gnyawali, D. R, & Fogel, D. S. (1994). Environments for entrepreneurship development: key dimensions and research implications. *Entrepreneurship Theory and Practice* 18(4): 43-62

Hannan, M. T., & Freeman, J. (1977). The population ecology of organizations. *American Journal of Sociology* 82: 929-946

Hart, S. L. (1992). An integrative framework for strategy-making processes. *Academy of Management Review* 17 (2): 327-351

Higgins, R. C. (1977). How much growth can a firm afford? *Financial Management* 6(3): 7-16

House, R. J. (1971). A path goal theory of leader effectiveness. *Administrative Science Quarterly*. 16(3): 321-339

Hoy, F., & Hellriegel, D. (1982). The Kilmann and Herden model of organizational effectiveness criteria for small business managers. *Academy of Management Journal* 25(2): 308-322

Jaccard, J.s, Turrisi, R., & Wan, Ch K. (1990). *Interaction effects in multiple regression* Thousand Oaks: Sage Publications.

Kaplan, R. S., & Norton, D. P. (1996). *The Balanced Scorecard: Translating Strategy into Action.* Boston, MA: Harvard Business School Press.

Kimberly, J. R. (1975). Environmental constraints and organizational structure. *Administrative Science Quarterly* 20: 1-9

Korunka, C., Frank, H., Lueger, M., & Mugler, J. (2003). The entrepreneurial personality in the context of resources, environment, and the startup process – a configurational approach. *Entrepreneurship Theory and Practice* 28(1): 23-42

Krouse, C. G. (1972). Complex objectives, decentralization, and the decision process of the organization. *Administrative Science Quarterly* 17(4): 544-554

Lant, T. K. (1992) Aspiration level adaptation: An empirical exploration. *Management Science* 38(5): 623-644

Lawrence, P. R., & Lorsch, J.W. (1967). *Organization and environment*. Harvard University Press, Cambridge, M.A.

Lee, C., & Schuler, R. S. (1980). Goal Specificity and Difficulty and Leader Initiating Structure as Strategies for Managing Role Stress. *Journal of Management* 6(2): 177-187

Lewin, K., Dembo, T., Festinger, L., & Sears, P. (1994). *Personality and the behavior disorders*: Level of aspiration. In J. M. Hunt (Ed.), 333-378. New York: Ronald Press

Locke, E. A. (1996). Motivation through conscious goal-setting. *Applied and Preventive Psychology* 5: 117-124

Locke, E.A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist* 57: 705-717

Lumpkin, G.T., & Dess, G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturin* 16: 429-451.

Maclver, R. M. (1955). Theory of coordination between bureaucratic organizations and community primary groups. *Administrative Science Quarterly* 11: 118-124

March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science* 2(1): 71-87

Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science* 29: 770-791.

Miller, D., & Friesen, P. H. (1983). Strategy-making and environment: The third link. *Strategic Management Journal* 4: 221-235.

Miller, D., & Tolouse, J.M. (1986). Strategy, structure, CEO personality and performance in small firms. *American Journal of Small Business* 10(3): 47-62

Mizik, N., & Jacobson, R. (2003). Trading off between value creation and value appropriation: The financial implications of shifts in strategic emphasis. *Journal of Marketing* 67(Jan): 63-76

Morel, B., & Ramanujam, R. (1999). Through the looking glass of complexity: The dynamics of organizations as adaptive and evolving systems. *Organization Science* 10(3): 178-293

Palmer, T. B., & Wiseman, R. M. (1999). Decoupling risk taking from income stream uncertainty: A holistic model of risk. *Strategic Management Journal* 20: 1037-1062.

Perrow, C. (1972). Complex Organizations, Scott-Forsman in Stacey, R.D., (1996) *Strategic Management & Organisational Dynamics*, 2nd ed, Financial Times: Pitman

Pfeffer, J., & Salancik, R. (1978). *The external control of organizations.* New York Harper & Row.

Randolph, W A., & Dess, G. G. (1984). The congruence perspective of organization design: a conceptual model and multivariate research approach. *Academy of Management Review* 9: 114-127.

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*. 12(4): 531-544

Rothaermel, F. T., & Deeds, D. L. (2004). Exploration and exploitation alliances in biotechnology: A system of new product development. *Strategic Management Journal* 25: 201-221

Schafer, D. S. (1990). Level of entrepreneurship and scanning source usage in very small businesses. *Entrepreneurship Theory and Practice* 15(2): 19-31.

Schumpeter, J. A. (1934). *The theory of economic development*. Cambridge. MA: Harvard University Press.

Settecase, M. (1999). The competitiveness assessment model: A thought-structuring approach to analysis. *Competitiveness Intelligence Review* 10(3): 43-50

Simon, H. A. (1964). On the concept of organizational goal. *Administrative Science Quarterly* 9(1): 1-22

Slater, S. F., & Narver, J. C. (1995). Market orientation and the learning organization. *Journal of Marketing* 59(3): 63-74

Staw, B. M., & Szwajkowski, E. (1975). The scarcity-munificence component of organizational environments and the commission of illegal acts. *Administrative Science Quarterly* 20: 345-354.

Steensma, H K., Marino, L., Weaver, K M, & Dickson, P H (2000). The influence of national culture on the formation of technological alliances by entrepreneurial firms. *Academy of Management Journal* 43: 951-973.

Steers, R. M. (1976). Factors affecting job attitudes in a goal-setting environment. *Academy of Management Journal* 19(1): 6-16

Starbuck, W. (1976 ). Organizations and their environment. In Dunnette (Ed.). *Handbook of Organizational and Industrial Psychology.* Chicago: Rand McNally.

Sutcliffe, K. M. (1994).What executives notice: Accurate perceptions of top management teams. *Academy of Management Journal* 37: 1360-1378.

Tan, J, & Litschert, R. J. (1994). Environment-Strategy Relationship and its Performance Implications: An Empirical Study of the Chinese Electronics Industry. *Strategic Management Journal* 15: 1-20

Tansik, D. A. (1973). Influences of organizational goal structures upon participant evaluations. *Academy of Management Journal*. 16(2): 265-276

Tosi, H., Aldag, R., & Storey, R. (1973). On the measurement of the environment: An assessment of the Lawrence and Lorsch environmental uncertainty subscale. *Administrative Science Quarterly* 18(1): 27-36

Tubs, M. E. (1986). Goal-Setting: A Meta-Analytic Examination of the Empirical Evidence. *Journal of Applied Psychology* 71(3): 474-483

Tushman, M. L., & Anderson, P. (1986). Technological discontinuities and organizational environments. *Administrative Science Quarterly* 31: 439-465.

Venkatraman, N. (1989). Strategic orientation of business enterprises: The construct,

dimensionality, and measurement. *Management Science* 35: 942-444.

Weick, K. E. (1979). *The social psychology of organizing* (2nd Edition). Boston, MA: Addison-Wesley

Weiss, N. A. (2004). *Introductory statistics.* 7th ed. Pearson Addison Wesley.

Yuchtman, E., & Seashore, S. (1967). A systematic resource approach to organizational effectiveness. *American Sociological Review* 32: 891-903.

Zahra, S. A. (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach.

*Journal of Business Venturing*.8: 319-340.

Zahra, S. A, & Covin, J. G. (1995). Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. *Journal of Business Venturing* 10(1): 43-58

Table 1. Useable responses by industry and country

| Country/Industry | Australia | Sweden | Mexico | Netherlands | *Total* | *Percentage (%)* |
|---|---|---|---|---|---|---|
| Food | 2 | 14 | 29 | 4 | *49* | *21.6* |
| Wood | 1 | 17 | 4 | 6 | *28* | *12.3* |
| Print | 0 | 21 | 4 | 9 | *34* | *15.0* |
| Rubber | 3 | 8 | 6 | 4 | *21* | *9.3* |
| Chemicals | 0 | 3 | 9 | 4 | *16* | *7.0* |
| Machine | 13 | 18 | 13 | 10 | *54* | *23.8* |
| Electronics | 7 | 3 | 12 | 3 | *25* | *11.0* |
| *Total* | *26* | *84* | *77* | *40* | *227* | *100* |
| *Percentage (%)* | *11.5* | *37.0* | *33.9* | *17.6* | *100* | |

Table 2. Means, standard deviations, and correlations

| | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
|---|---|---|---|---|---|---|---|---|---|
| Mean | 85.43 | 2.36 | 9.39 | .10 | .02 | 15419.41 | 61.14 | 22.18 | 24.31 |
| S.D. | 29.22 | 2.22 | .78 | .07 | .01 | 29424.53 | 79.02 | 30.36 | 5.91 |
| 1. Goal Attainment | 1 | | | | | | | | |
| 2. Goal Complexity | .43*** | 1 | | | | | | | |
| 3. Goal Diversity | -.05 | .11 | 1 | | | | | | |
| 4. Industrial Munificence | .20** | .10 | -.06 | 1 | | | | | |
| 5. Industrial Dynamism | -.039 | -.06 | -.00 | .56*** | 1 | | | | |
| 6. Industrial Complexity | .15* | .18** | .09 | .26*** | .02 | 1 | | | |
| 7. Firm Size | .26*** | .15* | -.11 | .35*** | .03 | .27*** | 1 | | |
| 8. Internationalization | .004 | -.04 | -.15* | .33*** | .15* | -.08 | .41*** | 1 | |
| 9. Entrepreneurial Orientation | .120† | .07 | .11† | .17** | .03 | .04 | .24*** | .13* | 1 |

† $p < .10$ (2-tailed).

* $p < .05$ (2-tailed).

** $p < .01$ level (2-tailed).

*** $p < .001$ (2-tailed).

Table 3. Results from regression analyses

| Dependent Variable = Goal Attainment | | | | |
|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 |
| Controls | | | | |
| Size | .28*** (.03) | .18** (.03) | .17** (.02) | .18** (.02) |
| Internationalization | -.12† (.07) | -.13* (.06) | -.13* (.06) | -.13* (.06) |
| Entrepreneurial Orientation | .07 (.32) | .05 (.29) | .08 (.28) | .09 (.28) |
| Industrial Complexity | .08 (.00) | -.00 (.00) | -.01 (.00) | -.01 (.00) |
| Industrial Dynamism | -.04 (165.70) | -.11 (182.03) | -.09 (174.08) | -.09 (173.86) |
| Independent Variables | | | | |
| Industrial Munificence | | .18* (31.62) | .17* (31.22) | .18* (31.21) |
| Goal Complexity | | .42*** (.78) | .39*** (.75) | .38*** (.75) |
| Goal Diversity | | -.08 (2.19) | .34** (4.01) | .29* (4.26) |
| Two-Way Moderation Effects | | | | |
| Munificence * Goal Complexity | | | .14* (9.71) | .21** (12.63) |
| Munificence * Goal Diversity | | | -.50*** (47.95) | -.48*** (48.56) |
| Three-Way Moderation Effect | | | | |
| Munificence * Goal Complexity * Goal Diversity | | | | -.11 (30.27) |
| Model Fitness | | | | |
| $R^2$ | .10 | .30 | .37 | .38 |
| Adj. $R^2$ | .08 | .27 | .34 | .34 |
| F-value | 4.94*** | 11.44*** | 12.53*** | 11.61*** |
| d.f. | (5, 221) | (8, 218) | (10, 216) | (11, 215) |
| $\Delta R^2$ | | .20 | .07 | .01 |
| $\Delta$ F | | 20.12*** | 12.18*** | 1.84 |
| $\Delta$ d.f. | | 3 | 2 | 1 |

† $p < .10$ (2-tailed), * $p < .05$ (2-tailed), ** $p < .01$ level (2-tailed), *** $p < .001$ (2-tailed).

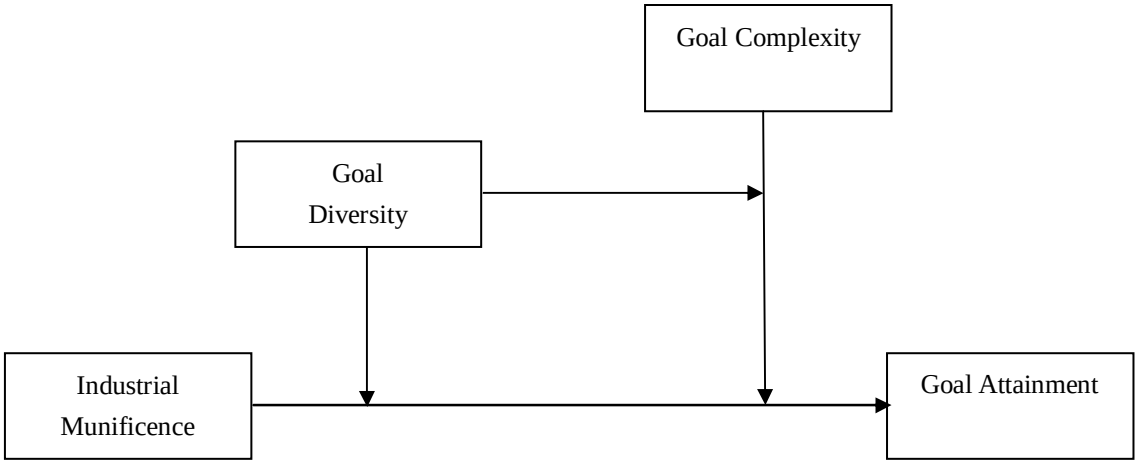


Figure 1. Conceptual Model

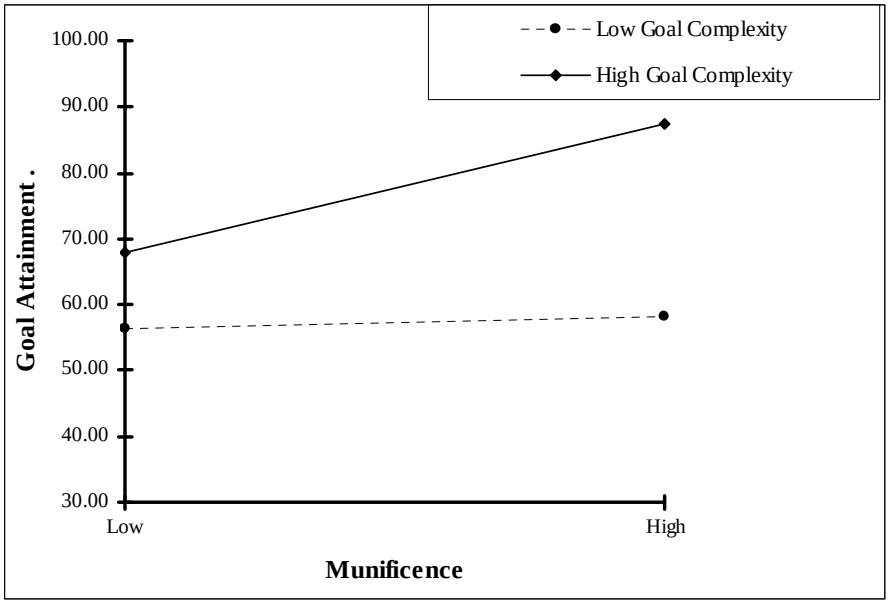


Figure 2. Interaction of Goal Complexity

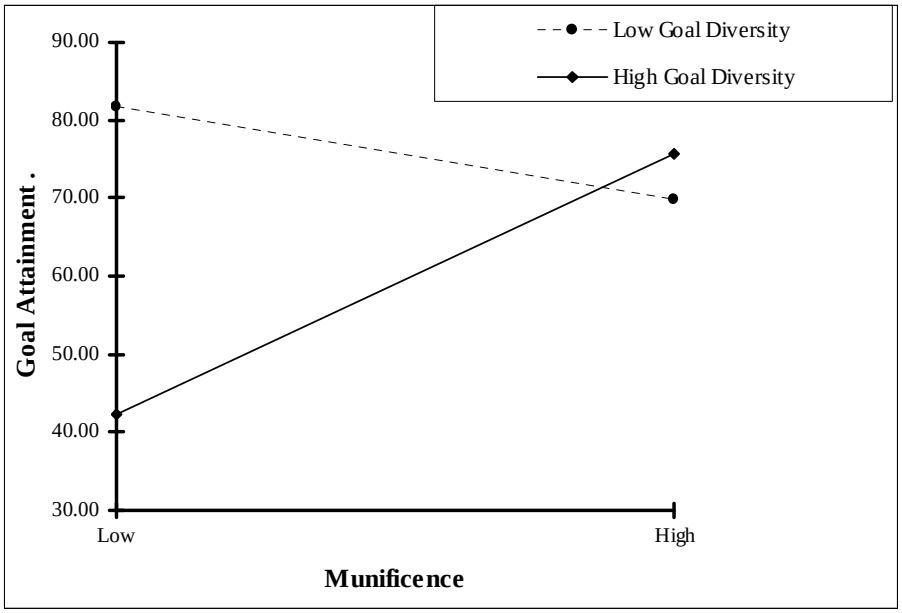


Figure 3. Interaction of Goal Diversity