The Innovation Climate in Public and Nonprofit Organizations

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ABSTRACT

This study compares public and nonprofit organizations on their perceived innovativeness and analyzes the environmental factors and organizational practices that are presumably related to innovation. This paper uses survey data from the National Administrative Studies Project III (NASP-III) that surveyed managers in state government agencies and nonprofit organizations in Georgia and Illinois over a three-wave, ten-month span, on a variety of organizational topics. Using principal component analysis the author develops a concept of innovation climate based on various elements that include innovation as an organizational value, willingness to take risks, high levels of trust from managers, low levels of red tape, a sense of pride in working for an organization, high quality of work, performance incentives, and high ethical standards. Findings from an OLS regression suggest that job flexibility, the quality and reputation of the organization, and those who view work as the most important aspect of their lives are positively related to both public and nonprofit innovation climates. Personnel flexibility (or inflexibility) negatively affects the innovation climate in both the public and nonprofit sectors, and other variables, including advancement motivation, vary by sector.

(184 words)

KEYWORDS: public management, nonprofit management, organizational innovation, state government, public and nonprofit comparison
INTRODUCTION

Over the past several decades, the role of innovation as it relates to organizational efficiencies, effectiveness and outcomes has gained wider attention. Innovation has been examined on the national stage in business, government, nonprofit organizations and in research in several ways, including: ad hoc committees such as the Advisory Committee on Measuring Innovation in the 21st Century Economy (2008); legislation such as the Edward M. Kennedy Serve America Act; and the establishment of the White House Office of Social Innovation and Civic Participation (Corporation for National and Community Service, 2009a; 2009b). Though collaboration between government and nonprofit organizations is common (Smith & Lipsky, 1995; Light, 1998; Milward & Provan, 2000, 2003), national initiatives such as the Kennedy Serve America Act are bringing renewed attention to the need for innovation within and among organizations.

Because of initiatives such as the Kennedy Act, managers in the public and nonprofit sectors will face challenges regarding the implementation of new policies, projects, and programs that come as a result of new collaborations between government and nonprofit organizations. Before addressing those issues, however, it is valuable to examine innovation in the public and nonprofit sectors. While much of the emphasis of this renewed focus on innovation has been placed on service delivery, the organizational capacity to innovate and various constraints on innovation must first be analyzed. The social innovations that are sought undoubtedly have an intricate relationship with organizational innovation. In some cases, management and organizational innovation precedes social innovation, and in other cases, quite the opposite is true. That is, social innovation may force organizations to innovate in order to
remain “competitive” with other organizations that have already enhanced their management practices with novel techniques.

Few empirical studies have been conducted with regard to managerial perceptions of innovation at the establishment level, especially as it is compared and contrasted between public (i.e., state or local government) and nonprofit organizations, and with regard to organizational attributes that are presumed to cultivate a climate of innovation within organizations. This paper will take steps toward filling that gap.

Damanpour and Schneider (2009) posited that innovation characteristics or attributes of innovation can be represented by two constructs. The first is a macro construct that reflects the characteristics that facilitate or inhibit the adoption of innovation by organizations within a population, which is what Damanpour and Schneider (2009) use in their study. The second construct is a micro construct that reflects the characteristics perceived by organizational members as either facilitating or inhibiting the use of innovation. The latter is the construct that this paper will use.

This study addresses the following questions:

1) Do specific environmental factors influence managerial perceptions of innovation, or the innovation climate within their respective organizations?

2) Do levels of perceived innovation vary between the public sector as compared to the nonprofit sector, and vice versa, and, if so, to what extent?

**Defining Innovation in the Organizational Context**

Many questions about the organizational aspects of innovation need further examination and analysis. Such questions concern the nature of innovation in public and nonprofit
organizations, whether those two sectors differ in innovativeness, the environmental factors that affect organizational innovation, or the various components that comprise a climate in which innovations can be produced (Damanpour & Evan, 1984; Drucker, 1985; Tropman, 1989; Kimberly, et. al, 1990; Linden, 1990; Borins, 1998; Light, 1998; Jaskyte, 2004, 2005; McDonald, 2007; R. Walker, 2008; Birkinshaw, et al., 2008). Are there specific factors or antecedents that promote or inhibit innovation? Are there aspects of innovation that are enhanced or carried out to a greater degree in the public sector as compared to the private sector, and vice versa?

Two articles are helpful in framing a general concept of innovation in this context and its components. Birkinshaw, Hamel and Mol (2008) center their work on management innovation, which involves the introduction of a novelty in an established organization, and represents a particular form of organizational change. They also define management innovation as the creation of a difference over time in the form, quality or state of the management activities in an organization, where the change is a novel or unprecedented departure from the past (Birkinshaw, Hamel & Mol, 2008). These authors identified four key perspectives in the literature they review:

1. An institutional perspective that focuses on the socio-economic conditions in which new management and ideas take shape (e.g., What institutional conditions give rise to the emergence and diffusion of management innovations?)

2. A fashion (or interaction) perspective that focuses on the dynamic interplay between users and providers of management ideas (e.g., How do aspects of supply and demand for new ideas affect their propagation?)
3. A *cultural perspective* that focuses on how an organization reacts to the introduction of a new management practice (*e.g.*, How do management innovations shape, and get shaped by, cultural conditions inside an organization?)

4. A *rational perspective* that focuses on how management innovations—and the individuals who drive them—deliver improvements in organizational effectiveness (*e.g.*, What is the role of managers in inventing and implementing new management practices?) (Adapted from Birkinshaw, Hamel & Mol, 2008: 827).

Richard Walker (2008) defines innovation as a process through which new ideas, objects, and practices are created, developed or reinvented, and which are new for the unit of adoption. Walker notes that government organizations sometimes innovate in search of legitimacy and may not fully adopt an innovation. An actual innovation must be more than an idea; implementation has to occur (R. Walker, 2008). This is just as easily assumed to be the case for many nonprofit organizations that also seek to innovate for legitimization purposes. Though this paper concerns itself less with quantifying specific items of innovations adopted and implemented, and more with discovering what environmental factors influence innovation, Walker’s (2008) research provides insightful perspective on the topic.

The literature on organizational innovation in public and nonprofit management includes studies that are widely varied and difficult to summarize. Nevertheless, authors have advanced useful observations and conclusions. Linden (1990), for example, concluded that innovative managers share seven characteristics: strategic action, holding on and letting go, creating a felt need for change, starting with concrete change, using structural changes, dealing with risk, and
using political skills. He also concluded that innovation requires rational and intuitive thinking and occurs where leaders provide time, freedom, flexibility and access to resources.

Borins (1998) concluded that successful innovations occur where there is systematic thinking and planning for change, and also where programs apply new technology, undertake process improvements, and utilize the private sector, voluntarism and internal competition. He stipulated that successful innovation takes place via three main paths: politicians responding to crises; newly appointed agency heads restructuring organizations; and midlevel and frontline workers responding to internal problems and taking advantage of opportunities. He found that about half the persons initiating award-winning innovations were career civil servants below the agency head level (Borins, 1998). This indicates that employees are willing to take on responsibilities or work that might not be required of them, and, perhaps more importantly, that they may engage in risk taking on their own behalf.

Light (1998) used a case analysis and a survey to assess innovation in nonprofit organizations. He cited four factors that influence innovativeness: the external environment, the internal structure, leadership, and internal management systems (Light, 1998). Many of these characteristics serve as the basis for the independent variables that will be used in this analysis.

**Comparing Innovation in Public and Nonprofit Organizations**

The study of innovation in organizations has been examined through a variety of lenses, but there are relatively few attempts to draw comparisons or contrasts across sectors. This is, perhaps, due to the difficulty of segregating organizations into distinguishable categories for purposes of comparison. Third-sector organizations are often grouped into a general “nonprofit” category whose components vary widely among themselves (e.g., charities, private family
foundations, community foundations, cooperative agencies, and the like). A purely charitable giving organization and a tax-exempt business association (e.g., a local chamber of commerce) may both be considered nonprofit organizations, even though their missions differ in scope and their size and capital resources may be quite different.

Management practices within the organizations are also assumed to differ depending on these conditions. Brody (2003) wrote on this “classification conundrum” that –

[t]here has been no clear demarcation between the public, business, and nonprofit sectors through history, and variously changing mixed-sector industries are common (see, generally, Brody, 1997)… [c]onfoundingly, for taxonomists, once we add factors such as resource dependence, the pattern of firms looks more like a marble cake than a matrix. It no longer makes sense to ask a binary question like: Does a nonprofit corporation that receives all of its funding from government contracts belong in the nonprofit sector or the public sector? (Brody, 2003: 240).

Regardless of the difficulties in categorizing organizations, nonprofits, business organizations and government agencies can be distinguished clearly enough for the exploration of the differences in innovation across sectors, or in the case of this study, between the nonprofit and public sectors.

The majority of scholarly studies have examined innovation primarily in the private sector, creating a need for additional studies of public and nonprofit organizations. Table 1 shows six responses related to job perceptions from the National Administrative Studies Project III survey, to which respondents from both the public and nonprofit sectors could choose which one of the following was more creative and innovative: 1) public organizations, 2) business organizations, or 3) no difference between the sectors in terms of innovativeness. The first five items demonstrate similar responses from respondents in both the public and nonprofit sectors. Most nonprofit sector respondents believe that work is more personally gratifying in the public
sector, or that there is no difference between the public and business sectors. Public sector respondents answered the question similarly.

Table 1. Perceptions of Job Attributes by Sector

<table>
<thead>
<tr>
<th>Public Sector Respondents</th>
<th>Nonprofit Sector Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public Sector</td>
</tr>
<tr>
<td>Work is more personally gratifying</td>
<td>43.10% (n=181)</td>
</tr>
<tr>
<td>Managers have more work autonomy</td>
<td>21.62% (n=91)</td>
</tr>
<tr>
<td>Persons doing similar jobs are more talented</td>
<td>6.95% (n=29)</td>
</tr>
<tr>
<td>Women have more opportunities</td>
<td>53.81% (n=226)</td>
</tr>
<tr>
<td>Minorities have more opportunities</td>
<td>51.54% (n=217)</td>
</tr>
<tr>
<td>Employees are more creative and innovative</td>
<td>12.86% (n=54)</td>
</tr>
</tbody>
</table>

Source: National Administrative Studies Project III

Most respondents from both sectors believe that managers have more work autonomy in the business sector, and that there is no difference in terms of whether persons doing similar jobs are more talented in one sector or another. Most respondents from both public and nonprofit sectors also believe that women and minorities have more opportunities afforded to them in the public sector.

Respondents do, however, differ regarding the statement, “Employees are more creative and innovative.” Of the public sector respondents, just about six percent claimed that their own sector had more creative and innovative employees, while over sixty-five percent said that business sector employees were more innovative, and slightly more than twenty-eight percent said there was no difference. Nonprofit sector respondents were more likely (just over thirteen percent) to say that their public sector counterparts were more innovative. And, of the nonprofit
respondents, about forty-four percent said employees in the business sector were more creative and innovative, while just over forty-two percent said there was no difference. These large variations in the perceptions of innovation indicate the need for more analysis of the public and nonprofit sectors at the organizational level.

These differences in perception are important because innovativeness depends on the ability to attract individuals with the skills needed in various aspects of organizational operations. Employees will have a set of preferences and expectations when choosing to work for a public or nonprofit organization. Regardless of sector, employees seek specific attributes in their work environment (Blank, 1985; Light, 2003). They may seek a job that is secure, and seek employment in organizations that have good reputations or those that try to retain employees through adequate salaries and other work-based incentives (Light, 2003). Those who have a desire to serve the public or the public interest could choose organizations in any sector—including public and nonprofit—but will be more likely to choose the organization that best suits their needs (Buelens & Van den Broeck, 2007). These needs may also include reasonable workloads and time commitments, clarification of responsibilities and tasks, flexible practices in the workplace, and opportunities for advancement or promotion (Goodstein, 1994; Hohl, 1996; Gonyea, 1999). Employees of public and nonprofit organizations typically seek to find meaning in the work they do and therefore may be more committed to work and have a greater sense of organizational pride (Boxx & Odom, 1991; Leete, 2000; Fernandez & Rainey, 2006).

Additionally, the nonprofit sector continues to draw a growing share of the U.S. labor market. In the two years spanning 2002 to 2004, the number of employees in the nonprofit sector grew by slightly more than five percent, while total employees across all sectors in the U.S. workforce decreased slightly, by two-tenths of one percent (Salamon & Sokolowski, 2006).

1 Not including volunteers.
These patterns of variation in the sectors provide theoretical and practical reasons to analyze the differences in innovation in the public and nonprofit sectors. From the theoretical perspective, public agencies are owned and funded by government, and are often subject to more legal and institutional constraints that may lower innovation. Nonprofits have more independence from government control, and often from government funding, which may enhance their ability to innovate. Most government agencies receive revenues from the tax base; nonprofits usually do not (except via government grants or contracts), such that nonprofits must rely on multiple sources of revenue (e.g., donations, corporate and foundation grants, and similar gifts-in-kind). Nonprofit funding is typically more cyclical and changing, whereas the permanence of the tax flow to the government gives that funding stream more permanence, and in some cases, this might lead to bureaucratic inertia. As a result, nonprofit organizations face a much more uncertain resource environment than their public sector counterparts. Therefore, nonprofits might stay innovative in response to turbulent conditions in their resource environment (Pfeffer & Salancik, 1978).

Frumkin (2002) highlighted three important differences between nonprofit organizations and their public and private counterparts: “1) they do not coerce participation; 2) they operate without distributing profits to stakeholders; and 3) they exist without simple and clear lines of ownership and accountability…these structural features give these entities a set of unique advantages that position them to perform important societal functions neither government nor the market is able to match” (p. 3). In practical terms, if nonprofits are more innovative, the public sector perhaps should rely more on nonprofits to innovate in various policy or social program areas.
Additionally, it is likely that there are implications for public service and those choosing it as a career. Surveys and other evidence indicate that service-oriented younger people regard nonprofit organizations as serving the public in a more direct manner than do public organizations, and as more effective vehicles for social change (Light, 2003). People often seek employment in nonprofits for reasons related to the nonprofits’ innovative capacity.

While it is important to avoid oversimplifying the distinctions among sectors (Bozeman, 1987; Rainey, 2003), evidence does indicate significant differences among public, private, and nonprofit organizations (Rainey, 1983; Perry & Rainey, 1988; Coursey & Bozeman, 1990; Lan & Rainey, 1992; Knott, 1993; Brilliant, 2001; Boyne, 2002; Rainey, 2003).

The Concept of Innovation Climate

Because this study is not concerned with specific or finite innovations, or with the adoption or diffusion of innovations (see, for example, J. Walker, 1969; Damanpour, 1988; Leonard-Barton, 1988; Rogers, 1995; Valente, 1996; Greenhalgh et al., 2004), but rather with behavioral and attitudinal aspects of innovation, it is necessary to define what exactly is being measured. An innovation climate, as defined in this study, is an atmosphere within an organization that fosters and propagates creative mechanisms to achieve organizational outcomes and has in place various traits among organization members that are conducive to creative and innovative ideas. Kanter (1988) wrote that “innovation-rate” studies are “suspect without information about the organizational context that produces the definition of that rate” and that “the organizational context itself should be the object of analysis, not individual innovation projects” (p. 511). This study is influenced, in part, by Ekvall’s (1983, 1996) conceptualization of the innovative organizational climate, where “climate is regarded as an attribute of the
organization, a conglomerate of attitudes, feelings and behaviors which characterizes life in the organization” (Ekvall, 1996: p. 105). Ekvall’s (1996) study used “climate” as part of an intervening variable affected by organizational resources such as human capital, buildings, knowledge, funds, and ideas, and having effects on organizational quality, productivity, job satisfaction, well-being, profit, and, of course, innovation. The effects on these organizational factors, in turn, are cyclical in nature and can have effects on the organizational resources and the organizational climate itself. This study deviates somewhat from Ekvall’s model in that aside from conceptualizing an innovation climate, a linear regression model will also be employed to see how a set of variables affect the innovation climate.

Ekvall’s (1996) instrument for measuring organizational structure and the climate for creativity and innovation was based on the Creative Climate Questionnaire (CCQ) that was developed from a research program in Sweden in the 1980s concerning conditions within organizations that promote or hinder creativity and innovation. The 50-item questionnaire covered ten different dimensions that resulted from several large-factor analytic studies. They are:

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1) *Challenge* involves the emotional involvement of organization members in operations and goals.

2) *Freedom* entails the independent behavior among members of the organization.

3) *Idea Support* is the way new ideas are received.

4) *Trust/Openness* describes the level at which people are more willing to communicate and share their ideas in an open and straightforward manner.

5) *Dynamism/Liveliness* is described by Ekvall (1996) as the “eventfulness of life in the organization.” (p. 107).

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6) **Playfulness/Humor** describes the organization that has a relaxed and jovial atmosphere at a high level, and rigidity and seriousness in lower levels.

7) **Debates** entail confrontation and clashes among viewpoints, ideas, and knowledge.

8) **Conflict** leads to personal and emotional tensions between organization members.

9) **Risk Taking**, as defined by Ekvall (1996), is the “tolerance of uncertainty in the organization” and that “concrete experimentation is preferred to detailed investigation and analysis” (p.108).

10) **Idea Time** is the amount of time organization members have at their disposal for generating and crafting new ideas.

Based on mean scores in the ten CCQ dimensions, Ekvall (1996) presumed that the organizational climate exerts influences on processes that promote or deter innovative outcomes.

Like Ekvall (1996), Saleh and Wang (1993) also carried out a study to determine the characteristics and factors that differentiate innovative organizations from less innovative organizations. They studied 34 Canadian organizations (14 of them winners of The Canada Awards for Business Excellence) and focused on the differences in managerial strategy, organizational structure, and organizational climate. The authors set out to establish that the entrepreneurial approach of managing organizations is related to innovation. They hypothesized that from an entrepreneurial strategy standpoint that risk taking, proactive approaches to work, and a commitment to one’s work contributed to innovation in organizations. In terms of the organizational structure and group functioning aspect, a flexible work structure, synthesis of other units and organization members, and a collective orientation also contributed to innovation in organizations. And finally, with regard to the organizational climate factor, the authors hypothesized that an open and promotive climate, collegiality, and the use of a reward system
further contributed to innovation in organizations. Their results indicated that innovative organizations have more calculated risk taking among organizational members and that management commitment to entrepreneurial activities and innovation was high. Furthermore, more innovative organizations were likely to better integrate talent into teams and task forces, have a better collective orientation among groups, and a reward system that promotes and reinforces entrepreneurial behavior.

Amabile & Gryskiewicz’s (1989) development of the Creative Environment Scales: Work Environment Inventory has also been instrumental in the assessment of organizational innovativeness. Their study, rather than constructing a comprehensive description of the work environment, is designed to elicit factors in the work environment most likely to facilitate creativity within organizations. The Creative Environment Scales: Work Environment Inventory (WEI) is a 135-item survey designed to assess “stimulants” and “obstacles” to creativity in work environments. It proposes that individual creativity within an organization depends on three components of the organization. They are: 1) skills in innovation management occurring primarily at the level of the local supervisor; 2) motivation to innovate at the organizational level; and 3) availability of resources, including materials, human capital and time. Additionally, the individual’s skills and motivations within the workplace serve as an additional influence to these components.

Amabile & Gryskiewicz (1989) outlined eight scales that used between four and eleven items to describe “Environmental Stimulants to Creativity” (p. 236). They are³:

1) Freedom: freedom in deciding what to do in one’s work or how to do it, or to have a sense of control over one’s work.

³ Summarized from Amabile & Gryskiewicz (1989), pages 236-237.
2) **Challenge**: a sense of having to work hard on challenging tasks and important projects.

3) **Resources**: access to appropriate resources, including people, materials, and information.

4) **Supervisor**: a supervisor who sets goals appropriately, supports the work group within the organization, values individual contributions, and serves as an intelligent, enthusiastic work model.

5) **Coworkers**: a diversely skilled work group in which people communicate well, are open to new ideas, constructively challenge each other’s work, trust and help each other, and feel committed to the work they are doing.

6) **Recognition**: fair, constructive feedback on work, leading to appropriate recognition and reward of good efforts; an atmosphere where employees’ interests as well as their skills are recognized.

7) **Unity and cooperation**: a cooperative, collaborative organizational atmosphere in which there is a lively flow of ideas around a shared vision.

8) **Creativity Supports**: an organizational atmosphere in which creativity is encouraged and mechanisms exist to foster the expression and development of creative ideas.

In addition to these eight scales, the authors also crafted four scales that described “Environmental Obstacles to Creativity” along with two assessment scales (**Creativity** and **Productivity**) for validation purposes, and to assess the overall creativity of the organizations. These scales contained between four and nine items each.

1) **Time Pressure**: too much work to do in the time allotted.
2) *Evaluation:* threatening evaluation procedures; an atmosphere of excessive negative criticism of work.

3) *Status Quo:* an emphasis in the organization on avoiding risks and doing things the way they have always been done.

4) *Political Problems:* areas of the organization serving as hindrances to each other’s work, through destructive competition, excessive concern about protecting territory, and other political problems.

5) *Creativity:* a creative, innovative organization or area of an organization, where a great deal of creativity is called for and where people believe they are actually producing creative work.

6) *Productivity:* an efficient, effective, and productive organization or area of an organization.

The WEI was administered to 645 respondents from five different groups that represented professional levels within organizations. They consisted of a federal government research and development organization, the chemicals research and development (R&D) arm of a major oil company, a nonprofit educational institution, the marketing, manufacturing and R&D divisions of a Fortune 100 textile manufacturing company, and a sample of business leaders from various professions and organizations in a Midwestern state. In each of these instances, all individuals sampled were asked to give their impressions of their respective organizational climate.

Amabile & Gryskiewicz’s (1989) preliminary validity analyses concluded that the WEI does discriminate between the different work environments, and that some of the scales are

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Amabile and Gryskiewicz (1989) note that most questions on the WEI refer implicitly or explicitly to the organization and that very few refer to a specific department, area or team within the organization. They note that the Midwest sample is a special case since those respondents were each from a different organization, and as such should be considered a “baseline” group (p. 244).
significantly related to creativity within the organization. The study provides some insights relative to this study in terms of comparisons between different types of organizations, such as the government lab and nonprofit educational institution. In terms of the environmental stimulants to creativity, the government lab ranked higher in only one area over the nonprofit educational institution, that being freedom. In terms of challenge, resources, supervisor, coworkers, recognition, unity and supports, the nonprofit educational institution ranked slightly higher. Regarding the four environmental obstacles to creativity, the nonprofit education institution ranked higher in terms of time pressure and evaluation, whereas the government lab ranked slightly higher in status quo and politics. And finally, on the assessment scales of creativity and productivity, the government lab ranked just above the nonprofit education institution in terms of creativity, while the nonprofit education institution ranked higher in terms of productivity. These results indicate that there are institutional differences between the types of organizations relative to their innovation climate and lend support to the analyses that will be undertaken in this study.

Data and Method

This study employs survey data from the National Administrative Studies Project III (NASP-III). NASP-III surveyed managers in state government agencies and nonprofit\(^5\) organizations in Georgia and Illinois over a three wave, 10-month span, on a variety of organizational topics including work motivations and environment, organizational rules and procedures, and various demographic characteristics (Feeney, 2006). At the completion of the

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\(^5\) The majority of nonprofit organizations were either classified as 501(c)(3) public charities or 501(c)(6) business leagues. Because of the different nature of these two types of organizations, separate regressions were run in a preliminary analysis for each type of nonprofit organization. In each case, results were nearly identical, and therefore all nonprofit observations will be left in one, single sample for a general comparison with the state government observations.
survey, 1,220 persons responded yielding an overall response rate of 39%. Of the respondents, 790 (64.8%) were from the public sector. Of those public sector respondents, 432 were from Georgia (54.7%) and 358 (45.3%) were from Illinois. Also from the public sector respondents, 440 (55.7%) were male and 344 (43.5%) were female. The nonprofit portion of the sample yielded a total of 430 (35.2%) respondents with 107 (24.9%) from Georgia and 323 (75.1%) from Illinois. From the nonprofit respondents, 204 (47.4%) were male and 221 (51.4%) were female.

Since the dependent variable of innovation climate is constructed with a factor score, it would be appropriate to employ the use of an ordinary least squares (OLS) model. Using OLS after creating variables from the principal component analyses provides for a more parsimonious model and lessens the threat of social desirability or response bias, as well as that of common source or monomethod bias.

**Variables**

Based on the literature reviewed for this study, an assortment of variables are used to analyze the innovativeness of organizations and influences on the innovation climate. Some of these variables will be used as stand-alone, single-item variables, while others will be included in index or factor score variables. A dummy variable is used to indicate whether or not the respondent works in a public or nonprofit organization (0 = public, 1 = nonprofit), labeled *nonprofit* as the default. A variable based on respondents ranking the importance of their *job security* as a motivation to take their current position (4 = very important, 3 = somewhat important, 2 = somewhat unimportant, and 1 = not important) is also employed. The variables *employee risk aversion* and *managerial risk aversion* are based on the statements “Employees in
this organization are afraid to take risks” and “Top management in this organization is afraid to take risks,” respectively, and are both rank-ordered on a four-point scale (4 = strongly agree, 3 = agree somewhat, 2 = disagree somewhat, and 1 = strongly disagree).

Two variables directly related to tasks are also included. The first is job flexibility, which is based on the statement “My job offers a great deal of flexibility” and is rank-ordered on a four-point Likert scale. Red tape, defined in the NASP-III survey as “burdensome administrative rules and procedures that have negative effects on the organization’s effectiveness,” was measured on an eleven-point scale from zero to ten, zero being “almost no red tape” and ten being a “great deal of red tape.” Respondents were asked to rate the ability to serve the public interest along with the overall quality and reputation of the organization. The variable work most important is based on the statement “The most important things that happen to me involve my work.” The variable for organization pride is based on the statement “I feel a sense of pride working for this organization,” and finally top management trust is based on the statement “Top management displays a high level of trust in this organization’s employees.” All of these variables are based on a four-point Likert scale.

Other variables delineate the nature of the work performed within the respective organizations. Quality of work is based on the statement “I would rate the overall quality of work being done in my organization as very good.” A variable on incentives is also included, based on the statement “There are incentives for me to work hard in my job.” And lastly, the statement “Because of the rules here, promotions are based mainly on performance” comprises the variable performance-based promotion. Quality of work, incentives, and performance-based promotion are all rank-ordered variables on a four-point Likert scale.
Several control variables are also included in the analyses, including three education variables\(^6\): whether respondents have a *high school diploma* (yes = 1, no = 0), a *bachelor’s degree* (yes = 1, no = 0) and whether or not they have a *graduate or professional degree* (yes = 1, no = 0). I control for the age of an organization by using a numeric variable for the year an organization was established, and also control for the number of full-time employees as a measure for organizational size. Dummy variables are also used as controls in terms of the state (*Georgia*), for sex (*female*), for the *age of the respondent*, and for race (*nonwhite*).

In order to provide a more parsimonious model, the use of principle component analysis has provided additional independent variables that measure different facets of motivation, an additional dimension of flexibility, and the dependent variable of innovation climate. As displayed in Table 2, nine items from the NASP-III survey comprise the dependent variable for *innovation climate*, and are based on the following statements:

1) Innovation is one of the most important values in the organization  
2) Employees in this organization are afraid to take risks. (reversed)  
3) Top management in this organization is afraid to take risks. (reversed)  
4) Top management displays a high level of trust in this organization’s employees.  
5) How would you assess the level of red tape in your organization? (reversed)  
6) I feel a sense of pride working for this organization.  
7) I would rate the overall quality of work done in my organization as very good.  
8) There are incentives for me to work hard in my job.  
9) This organization has high ethical standards.

Results from the principal component analysis reveal that NASP-III participants responded to each of these items in a similar manner with each factor loading falling between 0.653 and 0.793, an original eigenvalue of 4.725, and a Cronbach’s alpha of 0.828. All of the variables were measured on a four-point Likert scale with the exception of the variable on red tape. As such,

\(^6\) These variables were recoded to allow as much mutual exclusion as possible, though “Graduate or Professional Degree” will be highly correlated with “Bachelor’s Degree” (*i.e.* one must have a baccalaureate degree in order to obtain a graduate degree).
after the principal component analysis, a factor score was predicted in order to obtain the

*innovation climate* variable.

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**Table 2. Principal Component Analysis of Innovation Climate Items**

<table>
<thead>
<tr>
<th>Innovation is one of the most important values in this organization</th>
<th>Factor Loadings</th>
<th>Uniqueness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees in this organization are afraid to take risks (reverse)</td>
<td>0.653</td>
<td>0.574</td>
</tr>
<tr>
<td>Top management in this organization is afraid to take risks (reverse)</td>
<td>0.657</td>
<td>0.569</td>
</tr>
<tr>
<td>Top management displays a high level of trust in this organization's employees</td>
<td>0.793</td>
<td>0.371</td>
</tr>
<tr>
<td>How would you assess the level of red tape in your organization? (reverse)</td>
<td>0.711</td>
<td>0.494</td>
</tr>
<tr>
<td>I feel a sense of pride working for this organization</td>
<td>0.753</td>
<td>0.434</td>
</tr>
<tr>
<td>I would rate the overall quality of work done in my organization as very good</td>
<td>0.725</td>
<td>0.474</td>
</tr>
<tr>
<td>There are incentives for me to work hard in my job</td>
<td>0.677</td>
<td>0.542</td>
</tr>
<tr>
<td>This organization has high ethical standards</td>
<td>0.777</td>
<td>0.397</td>
</tr>
</tbody>
</table>

N = 1177
Original Eigenvalue = 4.725
Cumulative percentage = 52.51
Cronbach’s alpha = 0.828

^ Respondents were asked to rate from 0-10, 0 being "Almost No Red Tape" and 10 being "Great Deal of Red Tape." This was based on the definition of red tape as "burdensome administrative rules and procedures that have negative effects on the organization's effectiveness."

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Three measures of motivation are also included in the analysis. *Financial motivation* is based on respondents ranking of the importance of salary relative to their current job (4 = very important, 3 = somewhat important, 2 = somewhat unimportant, and 1 = not important).

Following Feeney and Rainey’s (2010) study, I replicated the results they obtained when performing a principal components analysis of work motivation items. Table 3 details these results, which for the most part were similar to Feeney and Rainey’s results. The variables that
comprised this analysis were based on rankings on the importance (4 = very important, 3 = somewhat important, 2 = somewhat unimportant, and 1 = not important) of:

1) Opportunity for advancement within the organization’s hierarchy.
2) Opportunity for training and career development.
3) Job security
4) The organization’s pension or retirement plan.
5) Desire for increased responsibility
6) Medical and insurance benefits.
7) Few, if any, alternative job offers.

Each of these, with the exception of the item ranking the importance the opportunity for training and career development, were used in Feeney and Rainey’s analysis. Like their analysis, this analysis resulted in two dimensions: security motivation and advancement motivation, representing 56.59% of common variance in the initial correlation matrix.

Table 3. Principal Component Analysis of Work Motivation Items
(see also Feeney & Rainey, 2010)

<table>
<thead>
<tr>
<th>Item</th>
<th>Security</th>
<th>Advancement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity for advancement within the organization’s hierarchy</td>
<td>0.252</td>
<td>0.759</td>
</tr>
<tr>
<td>Opportunity for training and career development^</td>
<td>0.237</td>
<td>0.756</td>
</tr>
<tr>
<td>Job Security</td>
<td>0.747</td>
<td>0.164</td>
</tr>
<tr>
<td>The organization’s pension or retirement plan</td>
<td>0.809</td>
<td>0.193</td>
</tr>
<tr>
<td>Desire for increased responsibility</td>
<td>-0.209</td>
<td>0.727</td>
</tr>
<tr>
<td>Benefits (medical, insurance)</td>
<td>0.822</td>
<td>0.190</td>
</tr>
<tr>
<td>Few, if any, alternative job offers</td>
<td>0.445</td>
<td>-0.162</td>
</tr>
</tbody>
</table>

N = 1176
Eigenvalue
Cumulative percentage
Cronbach’s alpha*

*Calculated with significant variables only. Figures in bold text indicate significant variables.

Note: Rotation converged in three iterations (rotation method: orthogonal varimax with Kaiser normalization). The dimensions represent 56.59% of the variance in the initial correlation matrix. ^Not included in Feeney & Rainey (2010).
In addition to *job flexibility*, and in order to maintain consistency with current research using NASP-III data, I again replicated results from another principal components analysis used by Feeney and Rainey (2010) on personnel flexibility items. Feeney and Rainey’s study uses these items as a dependent variable construct, whereas I use them as an independent variable construct. This analysis was based responses to indicating the level of agreement (4 = strongly agree, 3 = agree somewhat, 2 = disagree somewhat, and 1 = strongly disagree) on the following statements:

1) Because of the rules here, promotions are based mainly on performance (*Performance-based promotion*).
2) Even if a manager is a poor performer, formal rules make it hard to remove him or her from the organization (*Performance-based removal*).
3) The formal pay structures and the rules make it hard to reward a good employee with higher pay here (*Performance-based pay*).

My analysis yielded an identical replication of the results contained in Feeney and Rainey’s (2010) study and are detailed in Table 4. They point out that these items are similar to those used in research using previous editions of NASP data (*e.g.* DeHart-Davis & Pandey, 2005) as well as other research involving personnel flexibility (*e.g.* Brewer & Walker, 2005; Pandey & Moynihan, 2006). Each of the items loaded onto a single factor with an initial eigenvalue of 1.795, and had a Cronbach’s alpha of 0.657. Because the items are strongly correlated and measure a shared underlying concept, the items were converted to an additive index (Feeney & Rainey, 2010).

Additional variables include the desire for a low-conflict work environment, which was measured on a four-point Likert scale (4 = very important, 3 = somewhat important, 2 = somewhat unimportant, and 1 = not important). Again, following Feeney and Rainey (2009), mainly for consistency, I also included additional controls such as respondents’ total civic activity which is an additive index of responses ranging from zero to eight of a series of dummy
variables that lists groups or organizations to which the respondent might belong. This serves as an indicator of activity the respondents engage in outside of the workplace. Several variables related to a respondent’s previous or current job were also included as controls. Whether or not a

| Table 4. Principal Component Analysis of Personnel Flexibility Items |
|---------------------------------|------------------|------------------|
| (see also Feeney & Rainey, 2010) | Factor Loadings | Uniqueness |
| 1.) Performance-based promotion (reverse) | 0.642 | 0.588 |
| “Because of the rules here, promotions are based mainly on performance.” | |
| 2.) Performance-based removal | 0.831 | 0.309 |
| “Even if a manager is a poor performer, formal rules make it hard to remove him or her from the organization.” | |
| 3.) Performance-based reward | 0.832 | 0.308 |
| “The formal pay structures and rules make it hard to reward a good employee with higher pay here.” | |

N = 1191
Original Eigenvalue = 1.795
Cumulative percentage = 59.84
Cronbach’s alpha = 0.657

respondent’s previous job was in the private sector is included (0 = public or nonprofit, 1 = private) as are four additional variables on the current job. These variables are included to control for aspects that may influence the climate for innovation. They include whether or not the current job was: 1) a promotion (yes = 1, no = 0), 2) whether the respondent is a manager (yes = 1, no = 0), 3) tenure, measuring the number of years a respondent has worked in the position, and 4) an interaction variable for manager and tenure at the current job. Feeney and Rainey (2010) cite that the manager and tenure variables are proxies for salary and seniority, respectively.
RESULTS

Three regression models comprise the results of the study and are detailed in Table 5. The first is a full model, comprising all respondents in the sample (n = 875\(^7\)), along with a model on state government (public) respondents only (n = 586), as well as a model with exclusively nonprofit respondents (n = 289). The full model obtained an R-square of 0.603, with an adjusted R-square of 0.591, while the public sample had an R-square of 0.520 and an adjusted R-square of 0.498. Finally, the nonprofit sample achieved an R-square of 0.551 and an adjusted R-square of 0.508. The results from the three models yield mixed and interesting results that reveal that public and nonprofit sectors may not be entirely too different in terms of the independent variables that were tested. In terms of the items on motivation, the results were relatively similar for both the public and nonprofit samples. Security motivation found no traction in any of the models, indicating that those who place a high value on job security, pension plans, and other benefits are not likely to have a positive influence on the innovation climate, though the results were not statistically significant. Advancement motivation, on the other hand, was positive relative to innovation climate and statistically significant (p<0.01) in the full model and public model, though not in the nonprofit model. Respondents who indicated a strong desire to advance in the organization’s hierarchy, to gain opportunities for training and career development, and desire for increased responsibility are more likely to contribute to the innovation climate. The lack of statistical significance in the nonprofit model should not necessarily be construed negatively. In terms of organizational capacity, it may be the case that a sizeable amount of sampled nonprofit organizations have small hierarchical structures, or, that opportunities for

\(^7\) Accounting for omitted responses.
### Table 5. Ordinary Least Squares Estimates Predicting Innovation Climate

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Full Model</th>
<th></th>
<th>Public</th>
<th></th>
<th>Nonprofit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Unstandardized</td>
<td>Standardized</td>
<td>Unstandardized</td>
<td>Standardized</td>
<td>Unstandardized</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>SE</td>
<td>Beta</td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td>Nonprofit</td>
<td>0.032</td>
<td>(0.072)</td>
<td>0.016</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security Motivation</td>
<td>-0.016</td>
<td>(0.011)</td>
<td>-0.037</td>
<td>-0.007 (0.016)</td>
<td>-0.016</td>
<td></td>
</tr>
<tr>
<td>Advancement Motivation</td>
<td><strong>0.033</strong></td>
<td>(0.012)</td>
<td>0.074</td>
<td><strong>0.042</strong> (0.016)</td>
<td><strong>0.098</strong></td>
<td></td>
</tr>
<tr>
<td>Financial Motivation</td>
<td>-0.022</td>
<td>(0.031)</td>
<td>-0.017</td>
<td>-0.010 (0.041)</td>
<td>-0.008</td>
<td></td>
</tr>
<tr>
<td>Ability to Serve the Public</td>
<td>-0.008</td>
<td>(0.025)</td>
<td>-0.007</td>
<td>-0.012 (0.037)</td>
<td>-0.011</td>
<td></td>
</tr>
<tr>
<td>Personnel Flexibility</td>
<td><strong>-0.192</strong></td>
<td>(0.013)</td>
<td>-0.467</td>
<td><strong>-0.201</strong> (0.018)</td>
<td>-0.365</td>
<td></td>
</tr>
<tr>
<td>Job Flexibility</td>
<td><strong>0.261</strong></td>
<td>(0.028)</td>
<td>0.220</td>
<td><strong>0.271</strong> (0.034)</td>
<td>0.246</td>
<td></td>
</tr>
<tr>
<td>Quality and Reputation</td>
<td><strong>0.247</strong></td>
<td>(0.029)</td>
<td>0.222</td>
<td><strong>0.243</strong> (0.038)</td>
<td>0.236</td>
<td></td>
</tr>
<tr>
<td>Low-Conflict Environment</td>
<td>-0.019</td>
<td>(0.013)</td>
<td>-0.036</td>
<td>-0.031 (0.017)</td>
<td>-0.062</td>
<td></td>
</tr>
<tr>
<td>Work Most Important</td>
<td><strong>0.165</strong></td>
<td>(0.026)</td>
<td>0.149</td>
<td><strong>0.173</strong> (0.033)</td>
<td>0.165</td>
<td></td>
</tr>
<tr>
<td>Total Civic Activity</td>
<td>0.028</td>
<td>(0.015)</td>
<td>0.043</td>
<td>0.027 (0.019)</td>
<td>0.043</td>
<td></td>
</tr>
<tr>
<td>Previous Job: Private Sector</td>
<td>0.041</td>
<td>(0.062)</td>
<td>0.015</td>
<td>0.109 (0.093)</td>
<td>0.037</td>
<td></td>
</tr>
<tr>
<td>FTE</td>
<td>0.000</td>
<td>(0.000)</td>
<td>0.009</td>
<td>-0.000 (0.000)</td>
<td>-0.004</td>
<td></td>
</tr>
<tr>
<td>Year Established</td>
<td><strong>-0.001</strong></td>
<td>(0.001)</td>
<td>-0.059</td>
<td><strong>-0.001</strong> (0.001)</td>
<td>-0.040</td>
<td></td>
</tr>
<tr>
<td>Age of the Respondent</td>
<td>-0.035</td>
<td>(0.021)</td>
<td>-0.319</td>
<td>-0.053 (0.030)</td>
<td>-0.499</td>
<td></td>
</tr>
<tr>
<td>Age Squared</td>
<td><strong>0.000</strong></td>
<td>(0.000)</td>
<td>0.385</td>
<td><strong>0.001</strong> (0.000)</td>
<td><strong>0.570</strong></td>
<td></td>
</tr>
<tr>
<td>Georgia</td>
<td><strong>0.102</strong></td>
<td>(0.051)</td>
<td>0.054</td>
<td><strong>0.140</strong> (0.065)</td>
<td>0.076</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td><strong>-0.090</strong></td>
<td>(0.043)</td>
<td>-0.047</td>
<td><strong>-0.114</strong> (0.056)</td>
<td>-0.062</td>
<td></td>
</tr>
<tr>
<td>Nonwhite</td>
<td>-0.038</td>
<td>(0.059)</td>
<td>-0.014</td>
<td>-0.059 (0.070)</td>
<td>-0.026</td>
<td></td>
</tr>
<tr>
<td>Current Job: Promotion</td>
<td>0.031</td>
<td>(0.047)</td>
<td>0.016</td>
<td>-0.07 (0.061)</td>
<td>0.009</td>
<td></td>
</tr>
<tr>
<td>Current Job: Tenure</td>
<td>-0.003</td>
<td>(0.007)</td>
<td>-0.023</td>
<td>-0.003 (0.008)</td>
<td>-0.024</td>
<td></td>
</tr>
<tr>
<td>Manager*Tenure</td>
<td>0.008</td>
<td>(0.015)</td>
<td>3.770</td>
<td>0.022 (0.018)</td>
<td>11.492</td>
<td></td>
</tr>
<tr>
<td>Education: Graduate School</td>
<td>-0.084</td>
<td>(0.054)</td>
<td>-0.044</td>
<td>-0.071 (0.070)</td>
<td>-0.039</td>
<td></td>
</tr>
<tr>
<td>Education: College</td>
<td>-0.061</td>
<td>(0.059)</td>
<td>-0.029</td>
<td>-0.022 (0.076)</td>
<td>-0.011</td>
<td></td>
</tr>
<tr>
<td>Education: High School</td>
<td><strong>0.390</strong></td>
<td>(0.154)</td>
<td><strong>0.058</strong></td>
<td><strong>0.455</strong> (0.180)</td>
<td><strong>0.080</strong></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>10.029</td>
<td>(13.873)</td>
<td>9.127</td>
<td>(15.965)</td>
<td>3.383</td>
<td>(33.806)</td>
</tr>
</tbody>
</table>

Observations: 875
R-squared: 0.603
Adj. R-squared: 0.591
Standard Error: 0.607
F: 49.55***

**Notes:**
*** p<0.001, ** p<0.01, * p<0.05

Source: National Administrative Studies Project III
training and development are not present. This, however, brings to light a limitation to this study that should be examined in future research in terms of comparing organizations across sectors.

Financial motivation and the ability to serve the public and public interest did not achieve statistical significance in any of the three models. These results lead to a couple of points to consider. With regard to a person’s ability to serve the public or the public interest, it may be that it simply has no bearing on the motivation to innovate or have any relationship on the innovation climate (as the results seem to indicate). In terms of public service, it is conceivable that respondents do not believe one must be innovative in order to serve the public, but also that the outward service to the public is not a byproduct of organizational innovation. This presents another limitation issue in that the innovation climate, or any other organizational innovation should not be viewed as the end result. Future research should address the innovation climate as a moderating variable on performance outcomes such as clientele or citizen satisfaction.

Financial motivation could be tied to elements of personnel flexibility (or inflexibility, rather), which is statistically significant (p<0.001) and negatively related to the innovation climate in all three models. Personnel rules that do not allow for any sort of merit-based pay or promotion mechanisms, and have merit-protections negatively affect the innovation climate. Because of these personnel rules, one may assume that there is very little motive for innovation, especially in terms of financial motivation.

In terms of the specific tasks associated with one’s job, job flexibility is statistically significant (p<0.001) and positively related to the innovation climate. This is consistent with previous studies that claim that the more personal freedom an individual has with her job, the more likely she is to produce innovative ideas within her workplace. Additionally, those who perceive their organization to be of high quality and reputation also positively influence the
innovation climate and achieved statistical significance at the p<0.001 level, as did those who believe that work is the most important aspect of their lives. The desire for a low conflict environment was negative in the full and public models, but did not achieve statistical significance in any of the three models.

DISCUSSION AND CONCLUSION

This paper set out to make a contribution to research on innovation, by demonstrating that various organizational and environmental attributes can hinder or promote innovation in organizations. The results lend credibility to this assumption, and therefore, an additional dynamic to innovation research, and specifically to comparative elements of organizational innovation in public and nonprofit organizations have been provided in this study.

This analysis, based on perceptions of government and nonprofit managers, sheds light on some of the organizational aspects of innovation and the similarities and differences between the two sectors. The perspective of employees, and perhaps managers specifically, is important because of the nature of their jobs, since they are usually charged with implementation and management, and are often forced to find creative solutions to difficult problems. Whether or not policy makers, stakeholders, or members of the public consider certain aspects of organizational outputs to be innovative, it is important to explore the perceptions of those who do believe their organizations are innovative and what environmental aspects affect these perceptions. The results presented in this study provide interesting similarities and contrasts between the public and nonprofit sectors in terms of organizational innovation. Some of the differences in results between the public and nonprofit samples provide new phenomena that will require even further analysis.
The profusion of research on innovation continues to grow despite many aspects that do not seem to be entirely understood. The offshoot of research that focuses on the innovation climate, however, not only has room for expansion, but also has the potential to reveal aspects about the innovation process in organizations that enhance our understanding of innovation in general. A 2007 article in *The Atlantic* written by P. J. O’Rourke captures a consideration to make as research on the organizational climate of innovation is carried out in the future: “…even if we can’t see what innovations are around the corner, maybe we can at least predict what places are likely to be the most innovative in the future.” This may be especially true when examining the multiple components that promote or inhibit innovation in public and nonprofit organizations. There are, however, at least two areas that merit further treatment in future research: the construct of the innovation climate measure and innovation climate as an end result in and of itself versus innovation climate as a moderating variable on the effect of select environmental variables on organizational performance.

The use of secondary data could be considered a limitation to this study and underlines the necessity of constructing a more comprehensive innovation climate measure. While the factor score dependent variable employed in this research revealed much about the components that comprise the innovation climate, there are potentially missing elements that were unable to be included simply because there were not adequate measures in the data. With respect to Ekvall’s (1996) components of innovative organizational climates, many of the components such as freedom, trust, and risk taking influenced the innovation climate variable. Other aspects of Ekvall’s (1996) components, such as challenges within the organization, idea support, dynamism of the organization, and the amount of time organization members have at their disposal for generating and crafting new ideas are not captured well in this study, if at all. Amabile and
Gryskiewicz’s (1989) study, also influential in the construction of the climate variable used in this research, differed in components used to measure the climate for innovation. When examining the environmental stimulants to creativity in their study, they utilized scales that measured access to appropriate resources, the extent to which the organization provided a cooperative and collaborative atmosphere, and the extent to which creativity is encouraged and mechanisms are in place to foster development of ideas. These elements should be explored in greater depth to see if results are consistent with prior studies, though a caveat to these suggestions is the fact that a uniform measure of the innovation climate may not be a realistic expectation. As divergent as many theories are on singular innovation and innovation diffusion studies, we can expect the theories on what components are essential to innovation climate to differ greatly as well.

In order to rein in any conflicting theories, one aspect of measuring the innovation climate that should ultimately be taken into consideration is whether or not it is an end to the means or means to an end. The innovation climate reveals much about organizational phenomena that can occur in public and nonprofit organizations. What is not revealed in the current study, or in many previous studies, is whether or not a highly innovative climate leads to better organizational efficiency, effectiveness, or performance. Since the current study is focusing on the innovation climate of organizations, our results focus on the likelihood of certain organizational and personal attributes to either promote or inhibit innovation within the organization. We can make inferences and assumptions about idea generation and implementation, but using innovation climate as a moderating variable may prove to be more fruitful in terms of concrete research findings. For example, a study on the influence of elements
such as red tape\textsuperscript{8}, organizational size, freedom, or flexibility on measures of organizational performance may yield stronger results when interaction terms are created using the innovation climate variable. Research by Subramanian and Nilakanta (1996) indicates that a reconceptualization of innovativeness as a multidimensional construct can explain the mixed results of past research, which is something the current innovation climate variable can do. Furthermore, these authors found that innovativeness does improve organizational performance. Variables in the NASP-III data, such as items that measure clientele satisfaction or the perception of the quality of work being performed in the organization may be the most suitable items measuring some aspect of performance. Future research using these items from NASP-III or other data with similar variables should absolutely focus on the innovation climate as part of a multidimensional construct that can potentially reaffirm Subramanian and Nilakanta’s (1996) findings of organizational innovation leading to improved organizational performance\textsuperscript{9}.

As problems that society confronts become more complex, the necessity for innovation in the organizations that serve this greater society becomes critical. For those innovations to come to the fore, the organizational setting must be one that promotes innovation as a mechanism for achieving goals of the organization. The innovations themselves may be internal to the organization, such as innovative, creative ways to cut costs and better allocate resources, or they may be external in the sense that the innovation affects service delivery, hopefully leading to improvement and the greatest efficacy possible to the greatest number of people. Innovation is at times difficult to comprehend due to phenomenal elements of surprise and unpredictability, and

\textsuperscript{8} The innovation climate variable used in this study includes a variable on red tape, though a modification of the factor score used to construct the variable for the purpose of future research is not something that should be ruled out. In this case, red tape is the variable that forced the use of a factor score as the dependent variable rather than an additive or multiplicative scale since it was not measured on a four-point Likert scale as the other items included in the variable were measured.

\textsuperscript{9} I am currently examining this question with the NASP-III data and have found and presented (Ronquillo & Ryu, 2010) preliminary findings that suggest similar results to Subramanian and Nilakanta (1996).
as such, the difficulty of bringing in every organizational aspect into a singular study on innovation will remain a perennial and impractical challenge. Breaking the study of this topic into niches, however, and further delving into research on the climate of innovation—focusing on the assumption that many components affect an organization’s capacity to innovate—will be one of many maneuverings of management and organizational innovation research that will assist scholars to distill and disentangle the extant research and provide practical guidance to managers looking for ways to enhance their organizations.
References


