Identifying Antecedents to Innovation in the Workplace

and the Mediating Effect of Idea Sharing

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Abstract

Innovation is critical for helping organizations achieve a competitive edge by introducing new products and services. This study analyzes two negative antecedents to innovation: non-supportive governance mechanisms and resource inequality. To test hypotheses related to these antecedents, a comprehensive survey was created and distributed to 230 participants across 18 different organizations. Analysis of the data showed that both non-supportive governance mechanisms and resource inequality hinder organizational innovation. Furthermore, idea sharing behavior was found to mediate the influence of non-supportive governance mechanisms on organizational innovation, and also to mediate the influence of resource inequality on organizational innovation. The mediation findings are particularly important and contribute to the literature by suggesting processes that influence organizational innovation.

Keywords: Idea sharing, organizational innovation, non-supportive leadership, resource inequality.

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Fifteen years ago Apple Computer Inc. was on the verge of bankruptcy; today Apple Inc.

is the most valuable company in the world in terms of market capitalization (Bilton, 2011;

Shontell, 2010). This drastic change is due to many factors, one of which is Apple's ability to

introduce new processes, products and services (Shontell, 2010). In other words, Apple's

success is due to their ability to integrate creative and innovative processes into their business

model. Many organizations strive for Apple's ability to integrate innovative processes because

of the numerous benefits innovation provides organizations.

The field of innovation is broad and has been analyzed at different levels, such as the

individual level (Amabile et al., 1996), organizational level (Amabile, 1997; Amabile &

Gryskiewicz, 1989; Cummings, 1965) and from the external environment level (Leventhal &

March, 1981). This study focuses on the adoption of innovation at the organizational level.

Amabile et al. (1996) defines innovation as the *implementation* of an idea. Thus, innovations can

be in the form of a new product, service, strategy or any other application of a novel idea. The

integration of the innovation processes is usually intended to contribute to the efficiency or

performance of the organization (Damanpour, 1991). Researchers have shown clear

relationships between innovation spending and financial performance, which suggests that the

innovation process does in fact contribute to organizational performance (Jaruzelski & Dehoff,

2010). Also, innovation is frequently used as a method to adapt and change (Damanpour, 1991).

Studies suggest that innovative companies are able to combine and integrate readily accessible

resources to create unique and novel solutions, which helps achieve competitive advantage over

other companies (Kelley, 2005; McGrath, Tsai, Venkataraman, & MacMillan, 1996; Penrose, 1959; Van de Ven, 1986) and adapt to external threats to their organization (Hage, 1980).

The numerous benefits of innovation have led organizational innovation to be a main focus of a considerable amount of research. Over the years, research has aimed to understand *why* certain individuals, teams or organizations were more able than others to introduce innovative ideas and products (Amabile et al., 1996). Some studies in the area of innovation focus on individual factors, such as personality and cognitive abilities (MacKinnon, 1962; Mednick, 1962). Other studies have focused on how individual and organizational characteristics together influence organizational innovation (Amabile, 1997). These studies focus on what behaviors or conditions *precede* and *support* innovative processes in organizations. Recognizing these antecedents to the innovation process is critical in order to provide organizations insight about factors that can help produce new ideas and products.

Researchers have identified numerous antecedents to innovation. A meta-analysis by Martins and Terblanche (2003) identified five key determinates that influence organizational innovation. These are business strategy, structure, supportive mechanisms, risk taking and communication. The presence of these factors in a workplace setting was associated with more innovative behaviors. For instance, organizations with *structures* that are flexible and allow freedom to employees are associated with greater innovation (Martins & Terblanche, 2003). A meta-analysis by Shalley and Gilson (2004) also identified role expectations and organizational climate as two important antecedents to innovation. Organizations that clearly define goals and create expectations for innovation were associated with higher innovative output.

The above studies, and various others (Blazevic & Lievens, 2004; Forsuri & Tribó, 2006; Hadjimanolis, 2000), indicate that antecedent factors can *positively* influence organizational

innovation. However, currently there is a scant amount of research related to identifying *negative* antecedents to innovation —behaviors or conditions that are likely to hinder organizational innovation. One meta-analysis by Damanpour (1991) found that negative organizational factors, such as centralization, had a significant negative affect on organizational innovation. Thus, while identifying positive antecedent factors to innovation is important, it is also important to identify negative ones given their potential harmful effects on organizational innovation.

Negative Antecedents to Innovation

This study investigates two *negative* antecedents to organizational innovation. The first negative antecedent of interest is the presence of non-supportive governance mechanisms in the workplace. Non-supportive governance mechanisms refer to leadership behaviors that are not supportive and conducive to the innovation process, such as low expectations for employees and poor leader-employee communication (Scott and Bruce, 1994). Numerous researchers have suggested that governance mechanisms and leadership style are critical to the innovation process (Amabile & Gryskiewicz, 1989; Andriopoulos, 2001; Kanter, 1983; Peters & Waterman, 1982), and studies have shown that negative governance mechanisms can be harmful to the innovation process (Bock & Kim, 2002).

A study by Bruce and Scott (1994) suggests that there are three key characteristics necessary for successful leadership: leader-member exchange, leader role expectations, and charisma. In this study, Bruce and Scott (1994) distributed a survey that measured the three characteristics of interest and innovative behaviors. The results of the study found that all three leadership characteristics are associated with organizational innovativeness. *Leader-member exchange* indicates that the degree of trust between the supervisor and subordinate is related to innovativeness (Graen & Scandura, 1987). Therefore, poor leadership may harm innovativeness

by not creating trusting relationships, for example, by allowing idea appropriation. If a manager allows ideas to be stolen and used by others, employees may not trust the management and as a result may share their ideas less frequently, which can hinder innovation. Second, *leader role expectations* suggest that the degree to which subordinates innovative is due to the degree to which the leadership expects them to be innovative (Bruce & Scott, 1994). Therefore, poor leadership may not publicly express their expectations or goals for innovation, which may hinder employee motivation to participate in the innovation process. Lastly, *charisma* pertains to a leader's personal behaviors, such as being openly supportive, enthusiastic, and decisive (Bruce & Scott, 1994). Poor leadership may provide less feedback necessary for the innovative process. These characteristics suggest that leadership behaviors, which are central to our factor of non-supportive governance mechanisms, are associated with organizational innovation.

The second negative antecedent of interest in the present research refers to an uneven allocation of resources that are relevant to the innovation process or opportunities to engage in that process. This concept proposes that when resources/opportunities are unevenly distributed throughout an organization it can hinder organizational innovation by preventing some employees from participating in the innovation process. The "resources" in this concept are multidimensional; it refers to both financial resources and expectations provided by the leadership. An example of this concept is as follows; an organization provides only one team with the financial resources and expectations to generate ideas and be innovative. This concept is observed, for example, when organizations provide only the research and development team with resources for the innovation process and fail to distribute resources to frontline workers. Consequently, the organization creates an environment where employees *perceive* that only a certain group of individuals are supposed to generate the ideas and be innovative. Therefore,

employees that are not presented with resources or opportunities to innovate may be less apt to

generate or possibly share ideas because they think they are not *supposed* to be the ones

generating them. This negative antecedent is referred to in this study as *resource inequality*.

Studies suggest resource distribution is critical to organizational innovation (Behn, 1995;

Moosa & Panurach, 2008; Powers, 2011; Shalley & Gibson, 2004), and indicate that resource

inequality can hinder the innovation process (Behn, 1995; Moosa & Panurach, 2008). These

studies indicate that providing only one team with resources can be inefficient because it fails to

enable the rest of the employees in the organization to provide their insights and ideas, and

therefore reduces organizational innovation (Behn, 1995; Moosa & Panurach, 2008). For

instance, Moosa and Panurach (2008) cite a case study where frontline employees, who usually

are not provided resources related to the innovation process, were incorporated into company

workshop sessions. At the workshop sessions, employees were asked for feedback about how to

improve customer experience and were provided time and resources for the idea generation

process. The company then applied the feedback to their workplace strategies. Consequently,

the company saw increased customer satisfaction and other innovative benefits.

Mediating Effect of Idea Sharing

Much of the discussed research suggests that 1) non-supportive governance mechanisms

are directly associated with organizational innovation and 2) resource inequality is directly

associated with organizational output (Amabile & Gryskiewicz, 1989; Andriopoulos, 2001; Behn,

1995; Kanter, 1983; Moosa & Panurach, 2008; Peters & Waterman, 1982; Powers, 2011; Shalley

& Gibson, 2004). These direct relationships are valid, but there is a possibility that these

relationships could be affected by a third variable. This third variable, or mediator, may help

explain how non-supportive governance mechanisms and resource inequality are associated with

organizational innovation. Therefore, the relationship between the antecedents to innovation and organizational innovation may actually be mediated through another behavior in the workplace.

One behavior that may mediate the relationship between antecedents to innovation and organizational innovation is *idea sharing*. Idea sharing refers to the process of revealing ideas and collaborating with fellow employees. There has been a significant amount of research conducted on idea sharing and its effect on innovation (Dyer & Nobeoka, 1998; Laio, Fei & Chen, 2006; Lin, 2007), and these studies have indicated that the presence of idea sharing behavior increases organizational innovation. Laio, Fei and Chen (2006) distributed a survey in seventeen companies from various industries that was aimed to assess knowledge sharing behavior and innovation. Knowledge sharing was measured by frequency of knowledge donating (when employees pass on their knowledge and ideas to others) and knowledge collecting (when employees ask for advice to gain knowledge). Laio et al. (2006) found that knowledge sharing behaviors were significantly correlated with innovative practices. They suggest that idea sharing encourages the creation of novel knowledge, which supports organizational innovation. The ability of idea sharing to affect innovation might also suggest that idea sharing could act as a mediator for antecedents to innovation. Instead of a direct relationship between previously discussed antecedents to organizational innovation, idea sharing could be the psychological bridge that influences those relationships. Therefore antecedents to innovation may affect innovation through idea sharing.

The proposed mediating effect of idea sharing is consistent with studies indicating *non-supportive governance mechanisms* have a significant effect on *idea sharing*. Studies by Connelly and Kelloway (2001), Srivastava, Bartol and Locke (2006), and Bock and Kim (2002) found that perceptions of governance mechanisms are correlated with idea sharing practices in an

organization. For example, Bock and Kim (2002) designed a survey to assess leadership factors that affect individual knowledge sharing behavior in the organizational context. They found that expected contribution and positive attitude toward idea sharing are major leadership determinates of idea sharing behavior. Hence, leadership that has lower expectations, as well as negative attitudes toward idea sharing, should hinder ideas sharing in organizations. This indicates a potential relationship between governance mechanisms and the mediator, idea sharing.

Resource distribution has also been related to *idea sharing* behaviors (Ipe, 2003). A meta-analysis by Ipe (2003) was conducted to identify key behaviors and conditions in the workplace that can influence idea sharing. One key behavior that influenced idea sharing was the *opportunities* to share ideas. For example, some employees will be presented greater opportunities to share by being invited to training programs and structured work teams, whereas other employees will not be presented with these opportunities and as a result will share their ideas less frequently (Ipe, 2003). If fewer employees are given opportunities related to innovation, then fewer employees should be expected to be collaborating and sharing ideas, which is important for innovation. This indicates a potential relationship between the resource inequality and the mediator, idea sharing.

Theory and Hypotheses

This study examines the relationship between two antecedents to innovation and idea sharing. Much of the discussed research suggests that non-supportive governance mechanisms and resource inequality should *independently* predict organizational innovation (Amabile & Gryskiewicz, 1989; Andriopoulos, 2001; Behn, 1995; Kanter, 1983; Moosa & Panurach, 2008; Peters & Waterman, 1982; Powers, 2011; Shalley & Gibson, 2004). Based on previous research, idea sharing has the potential to act as a mediating variable for the relationship between

antecedents to innovation and organization innovation. The mediating variable, idea sharing, may help explain how the antecedents to innovation predict organizational innovation (cf. Baron & Kenny, 1986). Two separate mediation models are proposed for this study.

Model 1: The first proposed mediation model examines the mediating effect of idea sharing on the relationship between non-supportive governance mechanisms and organizational innovation. Previous studies suggest that non-supportive governance mechanisms predict innovation (Amabile & Gryskiewicz, 1989; Andriopoulos, 2001; Kanter, 1983; Peters & Waterman, 1982), and also that non-supportive governance mechanisms predict idea sharing (Bock & Kim, 2002; Connelly & Kelloway, 2001; Srivastava, Bartol & Locke, 2006). However, these studies have not proposed a mediated relationship. I argue that idea sharing should mediate the relationship between non-supportive governance mechanisms and organizational innovation because non-supportive governance mechanisms do not provide clear expectations for innovation. Without clear expectations for innovation, employees share ideas less, and as a result organizational innovation is harmed. Based on the preceding review, the following hypotheses are proposed. The model of these hypotheses is shown in Figure 1.

Hypothesis 1a: Non-supportive governance mechanisms should negatively predict organizational innovation.

Hypothesis 1b: Idea sharing should positively predict organizational innovation.

Hypothesis 1c: Non-supportive governance mechanisms should negatively predict idea sharing.

Hypothesis 2: Given that non-supportive governance mechanisms do not provide clear expectations for innovation, which reduces idea sharing and consequently organizational innovation, idea sharing should mediate the relationship between non-supportive

governance mechanisms and organizational innovation, meaning that when idea sharing

is taken into account the relationship between non-supportive governance mechanisms

and organizational innovation should be reduced.

Model 2: The second model examines the mediating effect of idea sharing on the

relationship between resource inequality and organizational innovation. As previously reviewed,

studies suggest a direct relationship between resource inequality and organizational innovation

(Behn, 1995; Moosa & Panurach, 2008; Powers, 2011; Shalley & Gibson, 2004), and that there

is a direct relationship between resource inequality and idea sharing (Ipe, 2003), such that fewer

opportunities to be involved in the innovation process reduces idea sharing. However, these

studies have not proposed a mediated relationship. I argue that idea sharing should mediate the

relationship between resource inequality and organizational innovation because in the presence

of resource inequality fewer employees are given the resources needed to be innovative and to

create ideas, therefore idea sharing and innovation are hindered. Based on the preceding review,

the following hypotheses are proposed. The model of these hypotheses is shown in Figure 2.

Hypothesis 3a: Resource inequality negatively predicts organizational innovation.

Hypothesis 3b: Idea sharing positively predicts organizational innovation.

Hypothesis 3c: Resource inequality negatively predicts idea sharing.

Hypothesis 4: Given that resources are unevenly distributed, then fewer employees will

have the resources/opportunities necessary to create and share ideas, which reduces

organizational innovation. Therefore, idea sharing should mediate the relationship

between resource inequality and organizational innovation, so that when idea sharing is

taken into account the relationship between resource inequality and organizational

innovation should be reduced.

Method

This study is a subset of a larger study on innovation in organizations. For the larger

study, our research team designed a comprehensive survey instrument to assess a number of

perceptions and organizational characteristics believed relevant to the generation, revelation, and

implementation of creative ideas (See Appendix B for the complete survey instrument). Some

concepts, such as innovation valuing and interpersonal competition, are represented on the

survey but are not included in the present research. The purpose of the present research is to

generate meaningful scales for governance mechanisms, resource inequality, idea sharing and

organizational innovation. Researchers in the past have created survey instruments to assess

innovation in organizations (Amabile & Gryskiewicz, 1989; Ekvall, 1996; Siegel & Kaemmerer,

1978); this research incorporates some of their findings, but also assesses several novel concepts

of interest.

Sample

The sample is comprised of 230 respondents, 46 (20%) of which did not answer the

demographic questions. Table 1 shows the demographic profile of the other 184 participants, and

the percentages shown are in regards to the 184 participants who completed these questions.

The demographic profile of this sample illustrates that the average responding employee

was a college-educated woman who had been working in the same organization for about 6 years

and in the same industry for over 10 years. The average respondent earned between $50,000 to

$69,999 annually and held a position around the middle of the corporate hierarchy.

Eighteen different organizations were represented in the sample. Table 2 shows the

demographic profile of these organizations, which is based on employee responses. Most

organizations were in the for-profit or non-profit sector. The majority of respondents worked in

organizations with over 100 employees. The sample aims to represent an average US

organization, but it should be viewed as a convenience sample. Most of these firms were based in

the Eastern and Midwestern regions of the United States. The organizations sampled came from

a variety of industries, including: health care, education, technology, manufacturing, and legal

services. Not shown in Table 2 is the fact that healthcare companies were disproportionately

over-represented.

Survey Response Format

The comprehensive survey instrument underwent pilot testing and several phases of

revision. After completing the survey, our research team used personal contacts to help distribute

it to a variety of organizations. We provided our contacts with a unique online link accompanied

by a short letter explaining the goals of the research and information about the survey. In

exchange for administering our survey, we offered participating companies a customized

consulting report analyzing their responses. These contacts then distributed the survey to

employees within their organization. Participants were told to allot 20-25 minutes to take an

anonymous survey. Whether the survey was to be taken on company time was left to the

discretion of the particular organization.

Most items on the survey used a five-point Likert format, with options ranging from

"Strongly Disagree" to "Strongly Agree", including a neutral option, "Neither Agree nor

Disagree." Additionally, we included a "Do Not Know" option for questions concerning facts

about the organization, such as "The topics of innovation and creativity come up in performance

reviews." A "Do Not Know" response here could indicate that the person has not been working

at the company long enough to have his or her performance reviewed. This indicates something

qualitatively different than a neutral response.

The majority of the questions assessed employee *perceptions* of workplace dynamics, and therefore did not require a "Do Not Know" option. An example is "I feel that many new ideas are put forth each year in this organization, but only a few are recognized and implemented." Furthermore, we tailored the vocabulary in our survey to the expected vocabulary of our participants. For example, while some believe creativity and innovation refer to distinct concepts (Amabile & Gryskiewicz, 1989), to most people they are synonymous and thus were used interchangeably in the survey.

Measures

This study uses employee *perceptions* of an innovative reputation as a proxy for organizational innovation. Though perceptions do not map perfectly onto objective innovation, perceptions still provide an accurate representation of the real world (Swann, 1984), and they have been used as a proxy for organizational innovation before (Amabile & Gryskiewicz, 1989; Ruef, 2002). The following is a description of our main outcome variable, organizational innovation, followed by descriptions of the predictor variables and proposed mediator (see Appendix A for a full list of the items used for each variable).

Dependent Variable

Organizational Innovation: The five items comprising this outcome variable tap into employees' assessment of *external* views and *internal* views of their organization's innovativeness. The following two items were used to assess the *external* views: "This organization has a reputation as one that implements creative ideas rapidly," and "This organization has been recognized publicly for its creativity and innovativeness." These items aim to assess the employees' perception of how outsiders view their organizational innovativeness. Asking participants for the *reputation/recognition* of their organization's

innovativeness should increase the validity of this scale because these measures are based on *outsiders'* view of the organization's innovativeness. An outsiders view on their organization's innovativeness should be considered a subjective measure. The following two items were used to assess the *internal* views: "My colleagues and I pride ourselves in our ability to create new ideas," and "When this organization makes a change, people embrace it." These items measure how employees perceive their own organization's innovativeness. These items were answered on a 5-point scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree,* 4 = *agree*, 5 = *strongly agree*). The items were coded so that higher scores indicated more organizational innovation (See Appendix A for forward and reverse coded items). This variable displayed valid internal reliability (Cronbach's $\propto$ = .78).

Independent Variables

Non-supportive Governance Mechanisms: This variable contains four items that assess employee perceptions of their management and their techniques relevant to the innovative process. Two items assess leadership *charisma*, which includes: "My manager's leadership style is conducive to creativity," (reverse coded) and "I feel that top management is enthusiastic about my project(s)" (reverse coded). This variable also assesses leadership *expectations* relevant to innovation, which includes: "Our leaders encourage us to spot problems early and to offer ideas for solutions or improvements" (reverse coded). Furthermore, this variable also assesses idea appropriation tendencies in the workplace, which is reflective of the leadership techniques relevant to preventing idea appropriation. This includes: "In this organization there have been problems with people using others' ideas, even if the individual used the idea on accident." These items were answered on a 5-point scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree,* 4 = *agree*, 5 = *strongly agree*). The items were coded so that higher scores

indicated a higher degree of non-supportive governance mechanisms (See Appendix A for forward and reverse coded items). This variable displayed valid internal reliability (Cronbach's $\propto$ = .75).

Resource Inequality: The six items comprising this variable aim to assess the distribution of resources related to the innovation process. Items assessing distribution of *resources/opportunities* relevant to the innovation process include: "I feel that higher ups in this organization will be rewarded to a greater degree than the bottom line workers for coming up with creative ideas," and "In this organization, managers tend to receive credit for creative ideas their employees generate." Items assessing *expectations* relevant to the innovation process include: "In this organization, lower tier and front line workers are responsible for carrying out the ideas of the higher ups, not for generating their own ideas," and "There is a group of individuals in this organization that creates most of the ideas that move the organization forward." These items were answered on a 5-point scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree,* 4 = *agree*, 5 = *strongly agree*). The items were coded so that higher scores indicated a higher degree of resource inequality (See Appendix A for forward and reverse coded items). This variable displayed valid internal reliability (Cronbach's $\propto$ = .80).

Proposed Mediator

Idea Sharing: This variable contains six items that assess behaviors related to the exchange of ideas between employees. This includes employees' likelihood of sharing ideas with one another, such as, "If I spotted a problem in how we do things in this organization, I would feel comfortable raising the issue or talking to others who have the capacity for resolving it," and "If I get a good idea, I am reluctant to share it because it is likely to foster jealously and dislike among my coworkers" (reverse coded). This variable also includes items that assess the

organization's overall atmosphere of idea sharing: "There is generally a cooperative and collaborative atmosphere in this organization," and "In this organization, there is a lively and active flow of ideas." These items were answered on a 5-point scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree,* 4 = *agree*, 5 = *strongly agree*). The items were coded so that higher scores indicated more frequent idea sharing (See Appendix A for forward and reverse coded items). This variable displayed valid internal reliability (Cronbach's $\propto$ = .81).

Covariates

Accurately modeling how non-supportive governance mechanisms, resource inequality, and idea sharing affect organizational innovation requires controlling for demographic factors that may influence organizational innovation. Studies have associated job satisfaction with individual and organizational innovativeness (Richmond & McCroskey, 1979), therefore *satisfaction with position* in the organization was controlled for in the analysis. Studies also indicate that occupational status plays a significant role in both perceived and actual innovativeness (Jaskyte, 2004; Rogers, 1983). Therefore, *position in hierarchy* was also controlled for in the analysis. Furthermore, it is important to control for *income* because many organizations give out rewards and bonuses for innovation. People that are more innovative, on average, may have larger annual salaries. People who chose "prefer not to answer" for the annual income question were excluded from these analyses.

A meta-analysis of the relationship between company size and innovativeness found that both personnel and non-personnel measures of organization size have an effect on organizational innovation (Damanpour, 1992). Therefore, *number of employees* and *estimated operating budget* of the organization was controlled for in the analysis. People who did not provide an estimate for their organization's operating budget were excluded from these analyses.

Studies suggest that education can also influence organizational innovation (Leung, 1998; Rogers, 1983). Some scholars view innovative ability as a function of the number of cognitive tools an individual or a team possesses (Johnson, 2010; Page, 2007; Ruef, 2002). These tools are learned through education, implying that increasing education should also increase innovative ability. Therefore, *education level* was used as another covariate.

Results

Controlling for Covariates

Data analysis was conducted as a two-stage backwards elimination regression procedure. In the first stage, the covariates were entered into the model as predictors of organizational innovation. The following covariates were entered into a backwards elimination regression predicting organizational innovation: estimate of number of employees, estimate of operating budget, level of education, satisfaction with position in organization, position on corporate hierarchy, and annual income. Any covariate failing to meet the $p < .10$ criterion was excluded from the second stage analysis. The only two covariates that were significantly correlated with organizational innovation were satisfaction and operating budget ($\beta = .443$, $p < .001$ and $\beta = -.225$, $p = .001$, respectively), so the rest were excluded from future regression analysis. See Table 3 for covariate significance. In the second stage the independent variables were added along with the covariates into a regression predicting organizational innovation. As I describe below, these analyses yielded findings consistent with expectations, in that the two antecedent factors (non-supportive governance mechanisms and resource inequality) independently predicted organizational innovation. However, because the research proposes mediational models, we turn to the mediation analyses and address the relationships among the predictors, outcome variable and mediator in more detail below.

Mediation Analysis for Non-supportive Governance Mechanisms Model

My analysis for the non-supportive governance model establishes how *non-supportive governance mechanisms* (H1a) and *idea sharing* (H1b) predict *organizational innovation* separately. The analysis also establishes the association between *non-supportive governance mechanisms* and *idea sharing* (H1c). The analysis for the proposed mediation effect of idea sharing on the relationship between *non-supportive governance mechanisms* and *organizational innovation* (H4) is outlined below. See Table 3 and Figure 3 for statistical analysis.

Data analysis for this mediation model was conducted following Baron and Kenny (1986). Four significant relationships for this meditation model had to be established in order to conclude some level of mediation. The findings indicated that:

1. *Non-supportive Governance Mechanisms* predict *Organizational Innovation* (H1a) ($\beta = -.41$, $p < .001$). The negative relationship shows that non-supportive governance mechanisms are associated with lower organizational innovation.

2. *Idea Sharing* predicts *Organizational Innovation* (H1b) ($\beta = .52$, $p < .001$). The positive relationship indicates that idea sharing is associated with greater organizational innovation.

3. *Non-supportive Governance Mechanisms* predict *Idea Sharing* (H1c) ($\beta = -.66$, $p < .001$). The negative relationship suggests that non-supportive governance mechanisms are associated with lower levels of idea sharing between employees.

I wanted to test whether adding *idea sharing* to the model reduced the effect of *non-supportive governance mechanisms* on *organizational innovation* (H2). When idea sharing is added to the model, the *non-supportive governance mechanisms* variable still exhibited a significant effect on *organizational innovation* ($\beta = -.19$, $p = .012$). Compared to the regression

with *non-supportive governance mechanisms* as the sole independent variable, this regression

generated a reduction in the effect of *non-supportive governance mechanisms*, from (β = -.41, *p*

< .001) to (β = -.19, *p* = .012).

In order to test the statistical significance of the mediation effect, a SOBEL test of

mediation was conducted (Preacher & Hayes, 2004). The test was reliable (z = -6.15, *p* < .001),

indicating the reduction in the effect of non-supportive governance mechanisms on

organizational innovation was significant. However, because the relationship between non-

supportive governance mechanisms and organizational innovation was still significant (*p* = .012),

this finding suggests idea sharing partially mediates the relationship between non-supportive

governance mechanisms and organizational innovation. So, in the presence of *idea sharing, non-*

supportive governance mechanisms play a less significant role in *organizational innovation*. This

suggests that idea sharing is an important variable through which non-supportive governance

mechanisms influence organizational innovation.

Mediation Analysis for the Resource Inequality Model

My analysis for the non-supportive governance model establishes how *resource*

inequality (H3a) and *idea sharing* (H3b) predict *organizational innovation* separately. The

analysis also establishes the association between *resource inequality* and *idea sharing* (H1c).

The analysis for the proposed mediation effect of idea sharing on the relationship between

resource inequality and *organizational innovation* (H4) is outlined below. See Table 4 and

Figure 4 for statistical analysis.

Again, the data analysis for this model was conducted following Baron and Kenny (1986).

Four significant relationships for this meditation model had to be established in order to infer

mediation. These tests included:

1. *Resource Inequality* predicts *Organizational Innovation* (H3a) (β = -.15, p = .031).
    The negative relationship indicates that resource inequality was associated with
    lower reports of organizational innovation.

2. *Idea Sharing* predicts *Organizational Innovation* (H3b) (β = .54, p < .001). The
    positive relationship indicates that idea sharing is related to greater levels of
    organizational innovation.

3. *Resource Inequality* predicts *Idea Sharing* (H3c) (β = -.45, p < .001). The
    negative relationship suggests that uneven distribution of resources/opportunities
    is associated with lower idea sharing.

I wanted to test whether adding *idea sharing* to the model reduced the effect of *resource inequality* on *organizational innovation* (H4). When idea sharing is added to the model, the *resource inequality* variable no longer exhibited a significant effect on *organizational innovation* (β = .04, p = .543). Compared to the regression with *resource inequality* as the sole independent variable, this regression generated a reduction in the effect of *non-supportive governance mechanisms*, from (β = -.15, p = .031) to (β = .04, p = .543).

In order to test the statistical significance of the mediation, I conducted a SOBEL test (Preacher & Hayes, 2004). The reduction in the effect of resource inequality on organizational innovation was reliable (z = -5.95, p < .001). Furthermore, because the relationship between non-supportive governance mechanisms and organizational innovation became non-significant (p = .543) when idea sharing was added to the model, this finding suggests idea sharing *fully* mediates the relationship between resource inequality and organizational innovation. So, in the presence of *idea sharing*, *resource inequality* plays a less significant role in *organizational*

innovation, suggesting idea sharing serves as a bridge between resource inequality and organizational innovation.

Discussion

The purpose of this study was to develop and test two mediation models of organizational innovation. Drawing on previous literature, two models were tested in which the relationship between antecedents to organizational innovation were mediated by idea sharing. The first model tested the mediating effect of idea sharing on the relationship between *non-supportive governance mechanisms* and organizational innovation. The second model tested the mediating effect of idea sharing on the relationship between *resource inequality* and organizational innovation. Both models tested provided a good fit to the data. The present findings shed further light on the processes that may hinder organizational innovation.

Non-supportive Governance Mechanisms Mediation Model

The first mediation model, which tested the mediating effect of idea sharing on the relationship between non-supportive governance mechanisms and organizational innovation, allows for several conclusions and implications. First, organizations are likely to observe decreased levels of organizational innovation when non-supportive governance mechanisms are present (H1a). The second finding suggests that organizational innovation is increased when there is a higher level of idea sharing in the workplace (H1b). This implies that more employee collaboration in the organization should fuel innovation. However, the third finding suggests idea sharing behavior is hindered by the presence of non-supportive governance mechanisms (H1c). Findings for hypotheses H1a, H1b and H1c all concur with previous research, which is critical for establishing mediation conclusions. Of greater interest, the findings indicate that idea sharing partially mediates the relationship between non-supportive governance mechanisms and

organizational innovation (H2), which is the primary contribution of this model.

While previous studies suggest a direct relationship between governance mechanisms and organizational innovation (Amabile & Gryskiewicz, 1989; Andriopoulos, 2001; Kanter, 1983; Peters & Waterman, 1982), this is the first study to our knowledge that has empirically studied mediators of this relationship. The results show that idea sharing is a mediating variable of the governance mechanisms and organizational innovation relationship, hence bridging the two. This means that if governance mechanisms are inadequate then the possible positive effects of idea sharing will have less of an effect on innovation. Identifying the mediating effect of idea sharing starts to deconstruct the broad relationship between non-supportive governance mechanisms and organizational innovation. The mediating effect of idea sharing should hold because non-supportive governance mechanisms are likely to not provide clear expectations and goals for innovation, which hinders idea sharing and organizational innovation.

Resource Inequality Meditation Model

In the second mediation model, which tested the mediating effect of idea sharing on the relationship between resource inequality and organizational innovation, several conclusions also follow from those results. First, organizations should see lower levels of organizational innovation when resources are unevenly distributed (H3a), so only providing certain employees with resources or opportunities to organizational innovation has the potential to hinder organizational innovation. The second finding suggests that organizational innovation is increased when there is a higher level of idea sharing in the organization (H3b). Again, this finding implies that more employee collaboration in the organization should facilitate innovation. Third, organizations are likely to observe decreased levels of idea sharing when resources are unevenly distributed in an organization (H3c). Findings for hypotheses H3a, H3b and H3c

together are in line with relationships obtained in previous research. However, the main

conclusion stems from assessing whether idea sharing is found to mediate the relationship

between resource inequality and organizational innovation (H4). The results of this model show

that idea sharing fully mediates this relationship.

The primary contribution of this model to the literature pertains to this mediating effect of

idea sharing on the relationship between resource inequality and organizational innovation.

While previous research has provided evidence for relationships between resource inequality and

organizational innovation (Behn, 1995; Moosa & Panurach, 2008; Powers, 2011; Shalley &

Gibson, 2004), this study indicates a mediation of this relationship as a function of idea sharing.

The mediating effect of idea sharing begins to explain *how* the condition of resource inequality

can actually affect organizational innovation. The mediating effect of idea sharing should hold

because resource inequality provides fewer employees with the resources necessary to create and

share ideas, which reduces organizational innovation.

Implications

The findings of the present study have important implications for organizational behavior.

By applying simple changes to business and management strategies, the findings can benefit

organizations through increasing their ability to foster creativity and innovation. The negative

effects of *non-supportive governance mechanisms* can be addressed using the three

characteristics of leadership outlined in the study by Bruce and Scott (1994). First, leader-

member exchange can be improved by giving subordinates more protection and autonomy,

which has been shown to increase leader-subordinate trust (Bruce & Scott, 1994). Trusting

management should decrease the fear of idea appropriation and increase idea sharing behavior

between employees. Second, leader-role expectations can be improved by having management

publicly display their goals and expectations for their employees. Employees are expected to

perform to a higher degree when expectations from management are apparent (Amabile &

Gryskiewicz, 1989). Third, improved leadership charisma should help team morale and increase

idea sharing (Srivastava, Bartol & Locke, 2006). Improving on these three characteristics should

help management create an organizational environment that fosters idea sharing and innovation.

Addressing the findings related to *resource inequality* is also important for idea sharing

and organizational innovation. In order to lessen the effects of resource inequality, organizations

should try to get more employees involved in the innovation process.   One method is by

designing a reward system for team performance (Behn, 1995). Providing rewards for team

performance encourages individuals to work together and to collaborate, hence integrating more

employees into the innovative process. Another method to integrate more employees in the

innovation process is to provide an outlet for feedback from subordinates (Powers, 2011).

Listening to feedback from employees lets them feel involved in the organization's processes

and may therefore increase their drive to be innovative (Powers, 2011).

Lastly, it is also important to address the findings related to idea sharing. The results of

this study found that idea sharing acts as a significant mediator between antecedents to

innovation and organizational innovation. Consequently, by supporting idea sharing we can help

increase innovation. One way idea sharing can be supported is through the physical environment

of the workplace. Studies have indicated that physical environments can support idea sharing

(Bitner, 1992; Martens, 2008). For instance, physically arranging different departments to be in

proximity of one another encourages cross-department idea sharing, which helps generate unique

and novel ideas. Furthermore, designing spaces that have common areas encourages casual

collaboration between various employees, which also supports idea sharing.

For managers and leaders, these findings identify ways that their business strategies and practices are helpful and harmful to innovation. In sum, applying simple changes related to idea sharing, leadership techniques and resource distribution can help organizations foster innovation and creativity.

Limitations

The nature of this study has a few inherent limitations. First, using a survey for data collection creates the possibility of self-report bias. Self-report bias may cause participants to exaggerate their answers or answer based on what they think the researchers may want them to answer. Furthermore, participants may not reveal information that is personal or negative about the organization for fear of being singled out in the data. We worked to reduce such concerns by making the survey anonymous.

Another limitation of this study is its correlational nature. Correlations show a relationship between two variables, but they do not indicate the causal direction of the relationship. Additionally, there is the possibility that there are confounding variables that were not controlled for which can affect the relationships found in this study.

General Conclusions

This study contributes to the body of organizational research by showing *how* organizational innovation can be influenced by the presence of non-supportive governance mechanisms and also by resource inequality. More importantly, this study has identified idea sharing as a bridge that can affect the influence of these negative antecedents on organizational innovation. Although various antecedents have previously been shown to predict organizational innovation, this research suggests more work is needed to explore the complex ways these antecedents interact with other factors to influence organizational innovation. The results of this

study suggest there are specific interwoven behaviors and conditions that can hinder

organizational innovation.

References

Amabile, T.M. (1997). Entrepreneurial creativity through motivational synergy. *Journal of Creative Behavior.* 31 (1), 18-26.

Amabile, T.M., Conti, R., Coon, H., Lazenby, J. & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal,* 39(5), 1154-1184.

Amabile, T. M., & Gryskiewicz, N. D. (1989). The creative environment scales: Work environment inventory. *Creativity Research Journal*, *2*(4), 231-253.

Andriopoulos, C. (2001). Determinants of organisational creativity: a literature review. *Management Decision*, *39*(10), 834-840.

Baron, R.B., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.

Behn, R. D. (1995). Creating an innovative organization: ten hints for involving frontline workers. *State and Local Government Review*, *27*(3), 221-234.

Bilton, N. (2011). Apple is the most valuable company. *New York Times*.

Bitner, M. J. (1992, April). Servicescapes: the impact of physical surroundings on customers and employees. *Journal of Marketing*, *56*, 57-71.

Blazevic, V., & Lievens, A. (2004). Learning during the new financial service innovation process antecedents and performance effects. *Journal of Business Research*, *57*, 374-391.

Bock, G. W., & Kim, Y. (2002). Breaking the myths of rewards: an exploratory study of attitudes about knowledge sharing. *Information Resources Management Journal*, *15*(2), 14-21.

Connelly, C. E., & Kelloway, E. K. (2001). Predictors of employees' perceptions of knowledge

sharing cultures. *Queen's School of Business*.

Cummings, L. (1965). Organizational climates for creativity. *Academy of Management Journal*.

    8 (3), 220-227.

Damanpour, F. (1991). Organizational innovation: a meta-analysis of effects of determinants and

    moderators. *The Academy of Management Journal*, *34*(3), 555-590.

Damanpour, F. (1992). Organizational size and innovation. *Organizational Studies*, 13(3), 375-

    402.

Dyer, J. H., & Nobeoka, K. (1998). Creating and managing a high performance knowledge-

    sharing network: the Toyota case.

Ekvall, G. (1996). Organizational climate for creativity and innovation. *European Journal of*

    Work And Organizational Psychology, 5(1), 105-123.

Fosfuri, A., & Tribó, J. A. (2008). Exploring the antecedents of potential absorptive capacity and

    its impact on innovation performance. *Omega*, *36*(2), 173-187.

Graen, G., & Scandura, T. (1987). Toward a psychology of dyadic organizing. *Research in*

    Organizational Behavior, 175-208.

Hadjimanolis, A. (2000). An investigation of innovation antecedents in small firms in the context

    of a small developing country. *R&D Management*, *30*(3), 235-245.

Hage, J. (1980). *Theories of organizations*. New York: Wiley.

Ipe, M. (2003). Knowledge sharing in organization: a conceptual framework. *Human Resource*

    Development Review, *2*(4), 337-359.

Jaruzelski, B., & Dehoff, K. (2010). How the top innovators keep winning. *Strategy and*

    Business.

Jaskyte, K. (2004). Transformational leadership, organizational culture, and innovativeness in

nonprofit organizations. *Non Profit Management and Leadership*, 15(2), 153-168.

Johnson, S. (2010). *Where good ideas come from: the natural history of innovation*. New York:

Riverhead.

Kanter, R. M. (1983). Dilemmas of Managing Participation. *The Changemasters: Innovation in

the American Corporation*.

Kelley, T. (2005). The ten faces of innovation. New York, NY: Currency-Doubleday.

Leung, L. (1998). Lifestyles and the use of new media technology in urban China.

Telecommunications Policy, 22(9), 781-790.

Levinthal, D.A., & March, J.G. (1981). A model of adaptive organizational search. *Journal of

Economic Behavior and Organization*, 2, 303-333.

Liao, S., Fei, W., & Chen, C. (2007). Knowledge sharing, absorptive capacity, and innovation

capability: an empirical study of Taiwan's knowledge-intensive industries. *Journal of

Information Science*, *33*(3), 340-359.

Lin, H. (2007). Knowledge sharing and firm innovation capability: an empirical

study. *International Journal of Manpower*, *28*(3), 315-332.

MacKinnon, D. W. (1962). The nature and nurture of creative talent. *American Psychologist*, *17*,

484-495.

Martens, Y. (2008). Unlocking creativity with the physical workplace. *Healthy and Creative

Facilities*.

Martins, E.C., & Terblanche, F. (2003). Building organizational culture that stimulates creativity

and innovation. *European Journal of Innovation Management*, 6(1), 64-74.

McCroskey, J.C., & Richmond, V.P. (1979). The impact of communication apprehension on

    individual in organizations. *Communication Quarterly*, 27(3), 55-61.

McGrath, R.G., Tsai, M., Venkataraman, S., & MacMillan, I.C. (1996). Innovation, Competitive

    Advantage and Rent: A Model and Test. *Management Science, 42*, 389-403.

Mednick, S. A. (1962). The associative basis of the creative process. *Psychological Review, 69*,

    220-232.

Moosa, N., & Panurach, P. (2008). Encouraging front-line employees to rise to the innovation

    challenge. *Strategy and Leadership*.

Page, S. E. (2007). *The difference: how the power of diversity creates better groups, firms,*

    schools, and societies. Princeton: Princeton University Press.

Penrose, E. (1959). *The Theory of the Growth of the Firm*. New York: Wiley.

Peters, T., & Waterman, R. (n.d.). *In search of excellence: lessons from America's best run*

    companies. New York: Harper, Row.

Powers, B. (2011). How to Engage the Front Line in Process Improvement. *Harvard Business*

    Review.

Preacher, K.J., & Hayes, A.F. (2004). SPSS and SAS procedures for estimating indirect effects

    in simple mediation models. *Behavior Research Methods, Instruments, and Computers*

    36 (4), 717-731.

Rogers, E. M. (1983). *Diffusion of innovations* (3rd ed.). New York: Free Press.

Ruef, M. (2002). Strong ties, weak ties and islands: Structural and cultural predictors of

    organizational innovation. *Industrial and Corporate Change,* 11 (3), 427- 449.

Scott, S. G., & Bruce, R. A. (1994). The influence of leadership, individual attributes, and

climate on innovative behavior: a model of individual innovation in the workplace. *The*

Academy of Management Journal, *37*(3), 580-607.

Shalley, C. E., & Gilson, L. L. (2004). What leaders need to know: a review of social and

contextual factors that can foster or hinder creativity. *The Leadership Quarterly*, *15*, 33-

53.

Shontell, A. (2010). The greatest comeback story of all time: how Apple went near

bankruptcy to billions in 13 years. *Business Insider*.

Siegel, S.M., Kaemmerer, W.F. (1978). Measuring the perceived support for innovation in

organizations. *Journal of Applied Psychology*, 63(5), 553-562.

Srivastava, A., Bartol, K. M., & Locke, E. A. (2006). Empowering leadership in management

teams: effects on knowledge sharing, efficacy, and performance. *Academy of*

Management Journal, *49*(6), 1239-1251.

Swann Jr., W.B. (1984). Question for accuracy in person perception: A matter of pragmatics.

Psychological Review, 91(4), 457-477.

 Van de Van, A. H. (1986). Central problems in the management of innovation. *Management*

Science, *32*(5), 590-607.

Author Note

Table 1

Demographic Profile of Sample Respondents

Characteristic	Response Options	Frequency (%)
Gender	Male	60 (32.6%)
	Female	124 (67.4%)
Education Level	Some High School	0 (0.0%)
	High School Graduate	9 (4.9%)
	Some College	47 (25.5%)
	4-Year College graduate	71 (38.6%)
	Graduate or Professional School	57 (31.0%)
Years Working for Organization	Less than 2	31 (16.8%)
	2-5	42 (22.8%)
	6-10	45 (24.5%)
	More than 10	66 (35.9%)
Years in Industry	Less than 2	10 (5.4%)
	2-5	26 (14.1%)
	6-10	37 (20.1%)
	More than 10	111 (60.3%)
Annual Income	Below $30,000	15 (8.2%)
	$30,000-$49,999	54 (29.3%)→25th percentile
	$50,000-$69,999	46 (25.0%)→50th percentile
	$70,000-$89,999	21 (11.4%)
	$90,000-$109,999	12 (6.5%)→75th percentile
	$110,999-$129,999	9 (4.9%)
	$130,000-$149,999	2 (1.1%)
	$150,000+	8 (4.3%)
	Prefer not to answer	17 (9.2%)
Position in Corporate Hierarchy	1 (Low i.e. front line worker)	23 (12.5%)
	2	27 (14.7%)→25th percentile
	3	20 (10.9%)
	4	17 (9.2%)
	5	29 (15.8%)→50th percentile
	6	18 (9.8%)
	7	16 (8.7%)→75th percentile
	8	14 (7.6%)
	9	12 (6.5%)
	10 (High i.e. CEO)	8 (4.3%)

Table 2

Demographic Profile of Sample Organizations

Characteristic	Response Options	Frequency (%)
Classification	For-Profit	107 (58.2%)
	Non-Profit	73 (39.7%)
	Government	4 (2.2%)
Number of Employees	<10	7 (3.8%)
	10-19	6 (3.3%)
	20-49	18 (9.8%)
	50-99	6 (3.3%)
	100-499	77 (41.8%)→25th and 50th percentile
	500-999	20 (10.9%)
	1,000-4,999	16 (8.7%)→75th percentile
	5,000-9,999	9 (4.9%)
	10,000+	25 (13.6%)
Operating Budget	$50,000-$299,999	2 (1.1%)
	$300,000-$999,999	8 (4.3%)
	$1 million- $4.9 million	24 (13.0%)
	$5 million- $ 9.9 million	10 (5.4%)
	$10 million or more	44 (23.9%)
	Do not know	96 (52.2%)

Table 3
Regression analysis for non-supportive governance mechanism mediation model

Covariates/ Independent Variables	Dependent Variables				
	Regression 1:	Regression 2:	Regression 3:	Regression 4:	Regression 5:
	DV: Organizational Innovation (First Stage Elimination)	DV: Organizational Innovation (H1a)	DV: Organizational Innovation (H1b)	DV: Idea Sharing (H1c)	DV: Organizational Innovation (H2)
Satisfaction with Position	β= .443***	β= .225***	β= .177**	-	β= .144**
Position on Hierarchy	β=-.028	-	-	-	-
Number of Employees	β= -.012	-	-	-	-
Estimated Operating Budget	β= -.225***	β= -.167***	β= -.160**	-	β= -.147**
Education Level	β= -.096	-	-	-	-
Annual Income	β= .056	-	-	-	-
Non-supportive Governance Mechanisms	-	β= -.409***	-	β=-.659***	β= -.192**
Idea Sharing	-	-	β= .519***	-	β= .410***

Note. *, **, and *** indicate significance at the $p < .1$, $p < .05$, and $p < .001$ levels, respectively.

Table 4

Regression analysis for resource inequality mediation model

Covariates/ Independent Variables	Dependent Variables				
	Regression 1:	Regression 2:	Regression 3:	Regression 4:	Regression 5:
	DV: Organizational Innovation (First Stage Elimination)	DV: Organizational Innovation (H3a)	DV: Organizational Innovation (H3b)	DV: Idea Sharing (H3c)	DV: Organizational Innovation (H4)
Satisfaction with Position	β= .443***	β= .406***	β= .177**	-	β= .178**
Position on Hierarchy	β=-.028	-	-	-	-
Number of Employees	β= -.012	-	-	-	-
Estimated Operating Budget	β= -.225***	β= -.212***	β= -.160**	-	β= -.162**
Education Level	β= -.096	-	-	-	-
Annual Income	β= .056	-	-	-	-
Resource Inequality	-	β= -.145**	-	β= -.453***	β= .039
Idea Sharing	-	-	β= .519***	-	β= .536***

Note. *, **, and *** indicate significance at the $p < .1$, $p < .05$, and $p < .001$ levels, respectively.
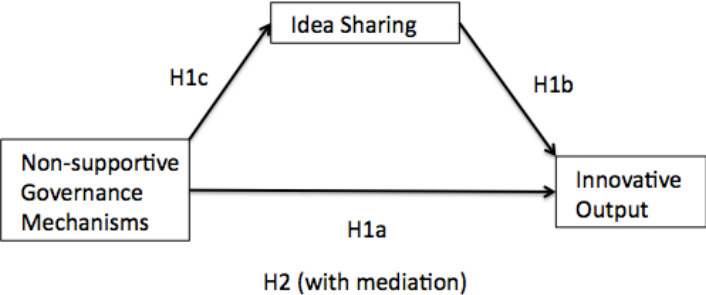
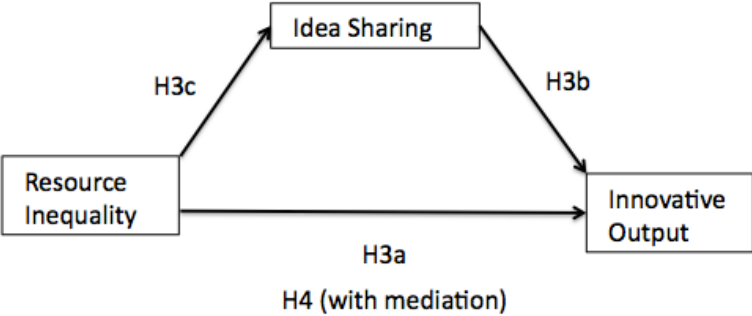*Figure 1*. Non-supportive governance mechanism mediation model.
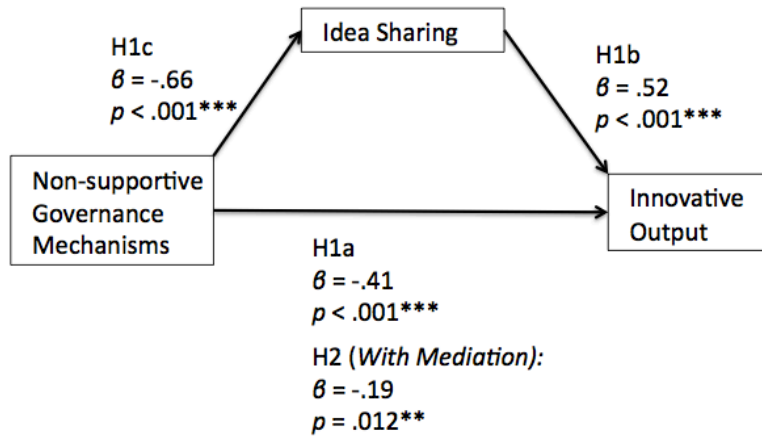
Figure 2. Resource inequality mediation model.

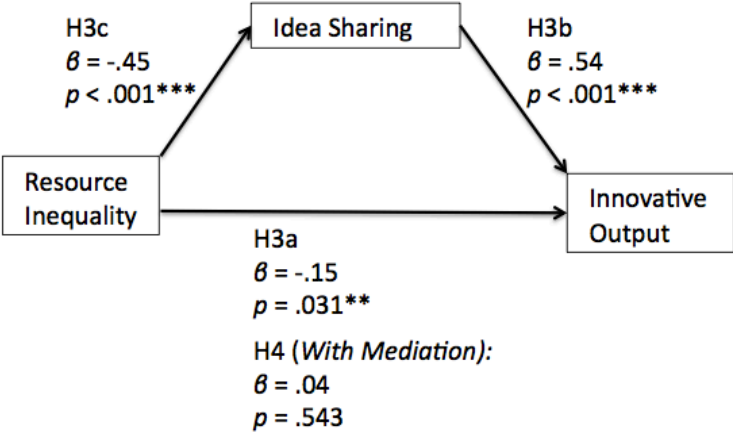*Figure 3.* Non-supportive governance mechanism mediation model with statistical analysis.

Figure 4. Resource inequality mediation model with statistical analysis.

Appendix A

Items Used for Variables of Interest

Perception of Non-supportive Governance Mechanisms

Q24: In this organization there have been problems with people using others' ideas, even if the individual used the idea by accident.

Q39: My manager's leadership style is conducive to creativity. (Reverse scored)

Q40: Our leaders encourage us to spot problems early and to offer ideas for solutions or improvements. (Reverse scored)

Q95: I feel that top management is enthusiastic about my project(s). (Reverse scored)

Perception of Resource Inequality

Q15: I feel that higher ups in this organization will be rewarded to a greater degree than the bottom line workers for coming up with creative ideas.

Q33: In this organization, managers tend to receive credit for creative ideas their employees generate.

Q76: People who are higher up in the corporate hierarchy generate most of the ideas in this organization.

Q77: There is a group of individuals in this organization that creates most of the ideas that move the organization forward.

Q78: In this organization, lower tier and front line workers are responsible for carrying out the ideas of the higher ups, not for generating their own ideas.

Q79: Some people within this organization have access to special information that allows them to come up with ideas others can't.

Idea Sharing

Q22: If I spotted a problem in how we do things in this organization, I would feel comfortable raising the issue or talking to others who have the capacity for resolving it.

Q26: When I have a great idea, I am hesitant to share it because I am worried that it will not be adopted. (Reverse scored)

Q31: I trust my close coworkers and fully share information and ideas with them.

Q32: If I get a good idea, I am reluctant to share it because it is likely to foster jealousy and dislike among my coworkers. (Reverse scored)

Q85: In this organization, there is a lively and active flow of ideas.

Q86: There is generally a cooperative and collaborative atmosphere in this organization.

Organizational innovation

Q64: My colleagues and I pride ourselves in our ability to create new ideas.

Q67: When this organization makes a change, people embrace it.

Q70: This organization has a reputation as one that implements creative ideas rapidly.

Q71: This organization has been recognized publicly for its creativity and innovativeness.

Q93: This organization has a good mechanism for encouraging and developing creative ideas.

Appendix B

The Complete Squelching Innovation Survey Instrument © Oscar Ybarra, Francis Graziano,

Maor Cohen

Q1 NOTE: Many of the items you will be asked to respond to deal with your opinions about the organization in which you work. In addition, many of the items will refer to creativity and innovation in your organization. For the purposes of this survey, we will use the terms creativity and innovation jointly to refer to the process of coming up with new ideas and the implementation of new ideas, whether those ideas are created within the organization or externally.

Q2 DISCLAIMER: All the data collected in this survey will be averaged together and individual cases are never studied. Though they may see the final results of the study, none of your coworkers will be able to trace specific responses to you. Thus, your responses are anonymous. We therefore ask that you answer each question with consideration and honesty.

Q4 Employees who exhibit creative ideas are recognized publicly within the organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q5 Many employees with innovative ideas have been promoted to higher positions in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q6 This organization provides time during normal working hours for employees to work on organizational "pet" projects that are not necessarily part of their job descriptions.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q7 Creative and innovative potential are part of the hiring criteria for applicants seeking employment in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q8 The word "innovation" (or a close synonym) is included in our company mission statement.
- Yes (1)
- Not Sure (2)
- No (3)

Q9 The topics of creativity and innovation come up in performance reviews.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q10 I feel that many new ideas are put forth each year in this organization, but only a few are recognized and implemented.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q11 This organization expects me to generate creative and innovative ideas on a regular basis.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q13 When the organization is profitable or budgetary constraints are few, there are more rewards given out for creativity and innovation.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q14 There are rewards given out for generating ideas in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q15 I feel that higher ups in this organization will be rewarded to a greater degree than bottom line workers for coming up with creative ideas.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q17 This organization encourages competition.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q18 Many fellow employees compete to gain recognition for new ideas.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q19 In general, the employees at this organization are competitive.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q21 This organization is likely to penalize someone for taking a risk (e.g., suggesting a new approach) that ends up failing.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q22 If I spotted a problem in how we do things in this organization, I would feel comfortable raising the issue or talking to others who have the capacity for resolving it.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q23 When I get a new idea, I share it with _____.
- ❑ No One (1)
- ❑ A Handful of Co-Workers (2)
- ❑ All of my Co-Workers (3)
- ❑ My Manager (4)

Q24 In this organization there have been problems with people using others' ideas, even if the individual used the idea by accident.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q25 When I have a great idea I am careful to make sure I get full recognition for it.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q26 When I have a great idea, I am hesitant to share it because I am worried that it will not be adopted.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q27 When I generate a great idea, my motivations are:
- To Advance the Organization (1)
- To Advance my Career (2)
- Intrinsic (Generating Ideas is Reward Enough) (4)
- Other (5) _____

Q28 If I generated a good idea, I will usually spend _____ contemplating and researching it before sharing it.
- A Minute (1)
- An Hour (2)
- A Day (3)
- A Week (4)
- A Month (5)

Q29 If I come up with a good idea, but do not know how to implement it, I am likely to give up on the idea.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q30 If I come up with a good idea, but do not know how to implement it, I am likely to ask someone for help.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q31 I trust my close coworkers and fully share information and ideas with them.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q32 If I get a good idea, I am reluctant to share it because it is likely to foster jealousy and dislike among my coworkers.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q33 In this organization, managers tend to receive credit for creative ideas their employees generate.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q34 If I generate and share a good idea, I am likely to be put in charge of its implementation.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q35 My coworkers and I tend to approach problems in similar ways.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q37 This organization has very strict rules on taking others' ideas, whether done on purpose or by accident.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q38 If someone took my idea, I would know exactly who I should talk to and the steps I should take to get credit for my idea.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q39 My manager's leadership style is conducive to creativity.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q40 Our leaders encourage us to spot problems early and to offer ideas for solutions or improvements.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q41 Our leaders encourage us to challenge their: (choose all that apply)
- Decisions (1)
- Processes (2)
- Ideas (3)
- Styles of Leadership (4)
- Other (5) _____
- None of the Above (6)

Q42 Emails sent within the organization are monitored.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q44 Communication across boundaries (departments, divisions) is encouraged in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q45 Open, candid discussions are encouraged in the workplace, even if they are uncomfortable at times.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q46 My colleagues and I aim to be flexible and able to change.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q47 My colleagues and I spend our free time thinking about creative ideas, processes, or services that could help this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q48 Most of my work is conducted at the individual level rather than at the group or team level.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q49 If I have a question regarding a specific topic, I am confident this organization employs an expert I can speak to.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q50 This organization has an employee generated system (platform, wiki, other capturing device) used to share_____.

- Best Practices (1)
- Ideas (2)
- Processes (3)
- Other (4) _____
- None of the Above (5)

Q52 The culture of this organization fosters innovation.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q53 The physical layout of this organization is conducive to innovation.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q54 My workplace environment is conducive to focus and concentration.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q55 There is little noise in the office or space in which I spend most of my work time.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q56 Colleagues often distract me from my work.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q57 I am intrinsically motivated to come up with creative ideas -- I'd do it even if I did not get paid for it.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q58 At work, I have all the information I need at my disposal in order to generate new ideas.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q59 I work closely with _____ people (choose a range of people below).
- 0-5 (1)
- 6-10 (2)
- 11-20 (3)
- 21-40 (4)
- 41+ (5)

Q60 This company broadcasts the areas of expertise of its employees so that others know to whom they can turn for advice.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q61 Please give one example of a way your organization's culture fosters creativity and innovation.

Q62 Please give one example of a way your organization's culture hinders creativity and innovation.

Q64 My colleagues and I pride ourselves in our ability to create new ideas.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q65 Most organizations experience tension between doing what is known and what works (and what current customers and stakeholders like and want) and trying new things such as pursuing new strategies, products, services, or ways of doing things. How would you characterize the organization in which you work?:
- Sticking to what is tried and true and not attempting new things (1)
- Sticking generally to what is tried and true but attempting new things only on occasion (2)
- Striking a balance by doing what is tried and true but also actively attempting various new things on a regular basis (3)

Q66 This organization is willing to consult outsiders when it has a problem.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q67 When this organization makes a change, people embrace it.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q68 I am an early adopter of new technologies.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q70 This organization has a reputation as one that implements creative ideas rapidly.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q71 This organization has been recognized publicly for its creativity and innovativeness.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q72 Outsiders view this organization as reluctant to change.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q74 I think I am more creative than others.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q75 It is never quite clear or predictable as to who will generate the good ideas in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q76 People who are higher up in the corporate hierarchy generate most of the ideas in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q77 There is a group of individuals in this organization that creates most of the ideas that move the organization forward.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q78 In this organization, lower tier and front line workers are responsible for carrying out the ideas of the higher ups, not for generating their own ideas.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q79 Some people within this organization have access to special information that allows them to come up with ideas others can't.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q80 I think many other employees in this organization are creative.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q81 What percent of creativity is innate, and what percent is learned? (Answers must sum to 100)
_____ Innate (1)
_____ Learned (2)

Q83 I feel that I am working on important projects.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q84 The tasks in my work are challenging.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q85 In this organization, there is a lively and active flow of ideas.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q86 There is generally a cooperative and collaborative atmosphere in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q87 This organization has a nurturing environment.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q88 People are recognized for creative work in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q89 There is an open atmosphere in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q90 New ideas are encouraged in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q91 People are rewarded for creative work in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q92 People are encouraged to solve problems in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q93 This organization has a good mechanism for encouraging and developing creative ideas.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q95 I feel that top management is enthusiastic about my project(s).
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q96 In my daily work environment, I feel a sense of control over my own work and my own ideas.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q97 I feel challenged by the work I am currently doing.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q98 Ideas are judged fairly in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q99 The tasks in my work call out the best in me.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q100 I am satisfied with the level of creativity called for in my daily work.
- Strongly Disagree (1)
- Disagree (2)
- Neither Disagree or Agree (3)
- Agree (4)
- Strongly Agree (5)

Q102 There are few external threats to the survival and well-being of this firm/ organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q103 The markets this firm/organization operates in are rich in resources for growth.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q104 This firm must frequently change its practices to keep up with competitors.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q105 The actions by competitors are quite easy to predict.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q106 Consumer tastes are fairly easy to forecast in the industry this organization operates in.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q107 If I had to choose between "the same" or "changing" to describe our current business and regulatory environment, changing would describe it better.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q108 Compared to a couple of years ago, this organization has grown considerably.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q110 Front line employees in this organization participate in the strategic decision process.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q111 This organization has highly formalized channels of communication for routine processes and practices.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)
- Do Not Know (6)

Q112 When the business, regulatory, and social environment is dynamic and changing quickly, organizations should stick to what is tried and true and wait for more stable times to experiment and try new approaches.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q114 Most organizations can be characterized by traits, just as people can. For example, a person can be characterized as smart or as someone who likes to learn, as can an organization. Using the traits below, please choose 4 traits that you believe your organization should work on strengthening (if you see it as a positive trait that should be strengthened) or diminishing (if you see it as a negative trait that should be diminished). Specifically, please indicate 4 positive traits you would like your organization to strengthen and 4 negative traits you would like your organization to diminish.

Q115 Choose 4 positive traits you would like your organization to strengthen.
- Active (1)
- Ambitious (2)
- Caring (3)
- Clever (4)
- Considerate (5)
- Competent (6)
- Determined (7)
- Efficient (8)
- Ethical (9)
- Friendly (10)
- Generous (11)
- Honest (12)
- Independent (13)
- Industrious (14)
- Reliable (15)
- Warm (16)

Q116 Choose 4 negative traits you would like your organization to diminish.
- Aggressive (1)
- Aimless (2)
- Aloof (3)
- Withdrawn (4)
- Arrogant (5)
- Dishonest (6)
- Hypocritical (7)
- Insensitive (8)
- Lazy (9)
- Mean (10)
- Selfish (11)
- Tokenistic (12)
- Undisciplined (13)
- Unscrupulous (14)
- Messy (15)
- Passive (16)

Q118 We gladly take on a broader range of challenges than others (with similar resources) would be able to.
- Never (1)
- Rarely (2)
- Sometimes (3)
- Often (4)
- Always (5)

Q119 We deal with new challenges by applying a combination of our existing resources and other resources inexpensively available to us.
- Never (1)
- Rarely (2)
- Sometimes (3)
- Often (4)
- Always (5)

Q120 When we face new challenges we put together workable solutions from our existing resources.
- Never (1)
- Rarely (2)
- Sometimes (3)
- Often (4)
- Always (5)

Q122 The following items are intended to assess how people approach problems. As you read through each item, think about whether the statement is consistent with how you typically approach challenges or problematic situations in you life or work.

Q123 There are always problems to solve, so it is important to categorize them into those that need action and those that don't.
- Does not describe my approach (1)
- Describes my approach a little bit (2)
- Describes my approach moderately (3)
- Describes my approach very much (4)

Q124 When a situation is unclear, I find it useful to experiment and test ideas to help clarify what is going on.
- Does not describe my approach (1)
- Describes my approach a little bit (2)
- Describes my approach moderately (3)
- Describes my approach very much (4)

Q125 Problem-solving is about experimenting and continuously re-defining the problem at hand.
- Does not describe my approach (1)
- Describes my approach a little bit (2)
- Describes my approach moderately (3)
- Describes my approach very much (4)

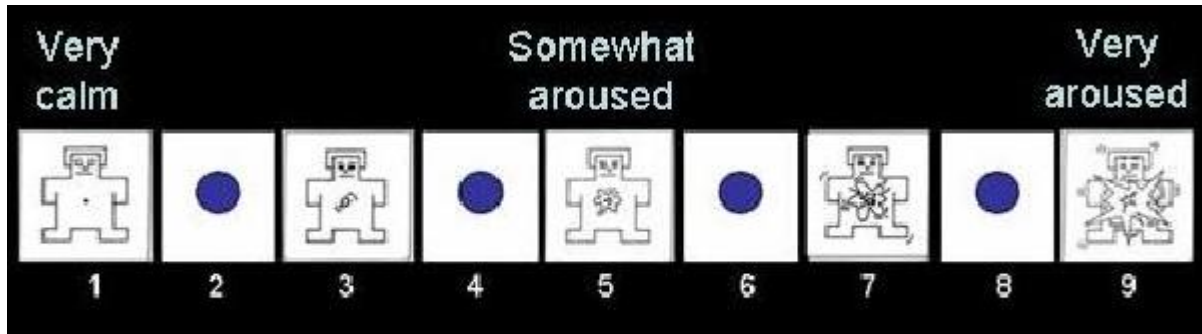Q126 During problem solving, if outcomes are not quite what I expected, I try to understand why.
- Does not describe my approach (1)
- Describes my approach a little bit (2)
- Describes my approach moderately (3)
- Describes my approach very much (4)

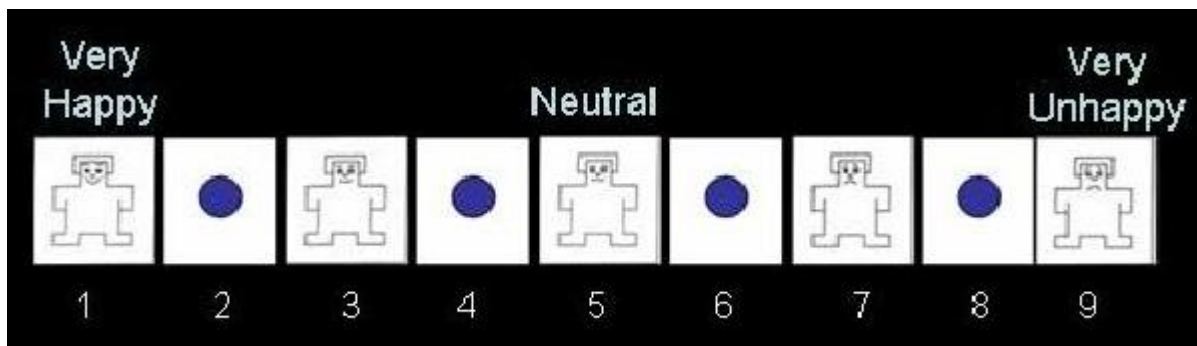Q127 I enjoy solving problems that are new and not well defined.
- Does not describe my approach (1)
- Describes my approach a little bit (2)
- Describes my approach moderately (3)
- Describes my approach very much (4)

Q128 I have various ideas or hunches when problem solving, and I test them to see if they hold water.
- Does not describe my approach (1)
- Describes my approach a little bit (2)
- Describes my approach moderately (3)
- Describes my approach very much (4)

Q130 Please choose the image that corresponds to how you generally feel while you're at work. When you click on your choice, the image will turn green. Clicking on the image twice will cancel your choice.

Q131 Please indicate how you feel while at work.

Q132 Please indicate how you feel while at work.

Q134 What is your age?

Q135 What is your gender?
- Male (1)
- Female (2)

Q136 What is your ethnicity?
- African American/ Black (1)
- American Indian/ Alaska Native (2)
- Asian American/ Pacific Islander (3)
- Caucasian/ European American (4)
- Hispanic/ Latino (5)
- Middle Eastern (6)
- Other (7) _____

Q137 What is the highest level of education you have attained?
- Some high school (1)
- High school graduate (2)
- Some college (3)
- 4 year college graduate (B.A. or B.S.) (4)
- Graduate or professional school (M.D., J.D., Ph.D.) (5)

Q138 What is the title of your job?

Q139 Where are you in the hierarchy of your organization? (1= low in the organization, ie: frontline worker; 10= high in the organization hierarchy, ie: CEO)
- 1 (Low) (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (High) (10)

Q140 What is your annual income?
- Below $30,000 (1)
- $30,000-$49,999 (2)
- $50,000-$69,999 (3)
- $70,000-$89,999 (4)
- $90,000-$109,999 (5)
- $110,999-$129,999 (6)
- $130,000-$149,999 (7)
- $150,000 and above (8)
- Prefer not to answer (9)

Q141 I am very satisfied with my present position in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q142 I identify with this organization and with what it does.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q143 Being a member of this organization is an important part of who I am.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q144 I feel ties with the other people who work in this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q145 I feel a sense of like-mindedness with other people who are part of this organization.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q146 I am committed to this organization and desire to help advance its goals.
- Strongly Disagree (1)
- Disagree (2)
- Neither Agree nor Disagree (3)
- Agree (4)
- Strongly Agree (5)

Q148 The organization I work for is:
- For Profit (1)
- Non-profit (2)
- Government (3)

Q149 How many years have you been in this industry?
- Less than 2 years (1)
- 2 to 5 years (2)
- 6 to 10 years (3)
- More than 10 years (4)

Q150 How many years have you been working for this organization?
- Less than 2 years (1)
- 2 to 5 years (2)
- 6 to 10 years (3)
- More than 10 years (4)

Q151 How many years has your organization been in existence?

Q153 What was your organization's operating budget for the last year? (In your best estimate)
- < $50,000 (1)
- $50,000 - $299,999 (2)
- $300,000 - $999,999 (3)
- $1 million - $4.9 million (4)
- $5 million - $9.9 million (5)
- $10 million or more (6)
- Do Not Know (7)

Q154 How many people are employed in your organization (In your best estimate): If there are multiple locations, in this one.
- < 10 (1)
- 10 - 19 (2)
- 20 - 49 (3)
- 50 - 99 (4)
- 100 - 499 (5)
- 500 - 999 (6)
- 1,000 - 4,999 (7)
- 5,000 - 9,999 (8)
- 10,000+ (9)

Q156 This organization has an account on:
- Facebook (1)
- Twitter (2)
- LinkedIn (3)
- Google+ (4)
- MySpace (5)
- Another social networking site (6) _____
- None (7)
- Do Not Know (8)

Q157 If I were in charge, this organization would place _____ emphasis on its social networking efforts.
- Much Less (14)
- Less (15)
- The Same (16)
- More (17)
- Much More (18)