

CREATIVITY IN THE WORKPLACE
AND ITS EFFECT ON EMPLOYEE
RETENTION

By

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ABSTRACT

Research has shown the importance of innovation in the workplace and its effect on the employee's emotional commitment. However, research has not proven that there is a directly positive correlation between workplace innovation and employee retention. Similarly, research has shown the importance of the employee-supervisor relationship, but not with respect to creative participation in the workplace. This study was conducted with a sample of 99 employees from the Midwestern manufacturing company. Results demonstrate there is a strong relationship between participation in creativity in the workplace and retention. No statistically significant support was found for the relationship between participation in creativity in the workplace and the employee-supervisor relationship. This study has extensive academic and practical implications, suggesting creative participation significantly increases employees' retention rates.

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INTRODUCTION

Companies continually work to improve employee retention and decrease turnover. Leadership and incentives often play a role in discussions regarding retention. Increasing employee retention and lowering turnover rates cuts cost for employers, increases employee satisfaction and allows the company to become leaner. Many companies and leaders often emphasize creativity in the workplace for similar reasons: employee satisfaction is expected to increase and the company can become leaner through new ideas.

Creativity has been defined in a multitude of ways in various studies. According to Amabile (1996), creativity “refers to original and novel work, emphasizing the generation of new and original ideas” (Madjar 2011, 731). However, creativity alone is not what improves companies. Baer (2012) stresses the difference between implementation and creativity: they are two unique steps in the innovation process. Coming up with good ideas is no longer enough—these creative ideas must be turned to action: implementation is required. Furthermore, research has shown the positive influence of leaders in the workplace, with specific regard to creativity (Scott & Bruce 1994, Tracy 2014). However, research has not shown the effect of incentivizing creativity in the workplace and its effect on employee retention. The current research suggests a gap in research detailing the relationship between employee creativity and retention within an organization. The purpose of this research is to identify the implications of creativity on employee retention. This relationship is critical to understanding the role that incentives, creativity, and leadership play in the workplace.

I hypothesize the higher number of issues and new ideas an employee submits and the company implements, the more likely the employee is to remain an employee of the company. For the purposes of this study, I define issues as problems that arise in the workplace that can be solved with a creative idea. Likewise, I define new ideas as innovations an employee generates and implements to improve the workplace. I believe the number of issues and new ideas is negatively correlated with voluntary turnover. This is supported by Madjar's (2011) research, which determined career commitment may encourage creativity as an opportunity for growth, as well as studies like Bratnicka & Bratnicki (2013) that determine the tangible results of employee creativity and Shalley (2000), which shows the negative correlation between creative participation in the workplace and employee intent to quit. Secondly, I hypothesize if a supervisor submits and implements a large number of issues and new ideas themselves, their subordinate employees will more likely submit and implement a large number of issues and new ideas (the supervisor's number of issues and new ideas positively moderates the employee's number of issues and new ideas and their turnover likelihood). This is supported by Scott and Bruce (1994), who determined that "role expectations of a supervisor influenced individual innovative behavior" (p. 600).

With the current research and these hypotheses, I created a study that uses data from four companies' programs that incentivize the generation and implementation of creativity or innovation and its effects on organizational retention. The program is the Issues and New Ideas program (INI program), implemented by a Midwestern manufacturing company to increase innovation in the workplace. The INI program incentivizes employees to submit creative ideas and implement the ideas in order to

receive a quarterly bonus. This study will contribute to the research on creativity implementation and its effects, as well as the effect that a supervisor, leading by example, has on employees' participation in company programs and ultimately their retention. Through the study of the company's subsidiaries, four Midwestern manufacturing companies, the relationship between participation in the program and employee retention was tested using creativity implementation programs and conducting a survival analysis of the data. Not only are managerial effects for the company used for the study are anticipated, but also widespread effects regarding both supervisors and creativity implementation as tools to retain employees.

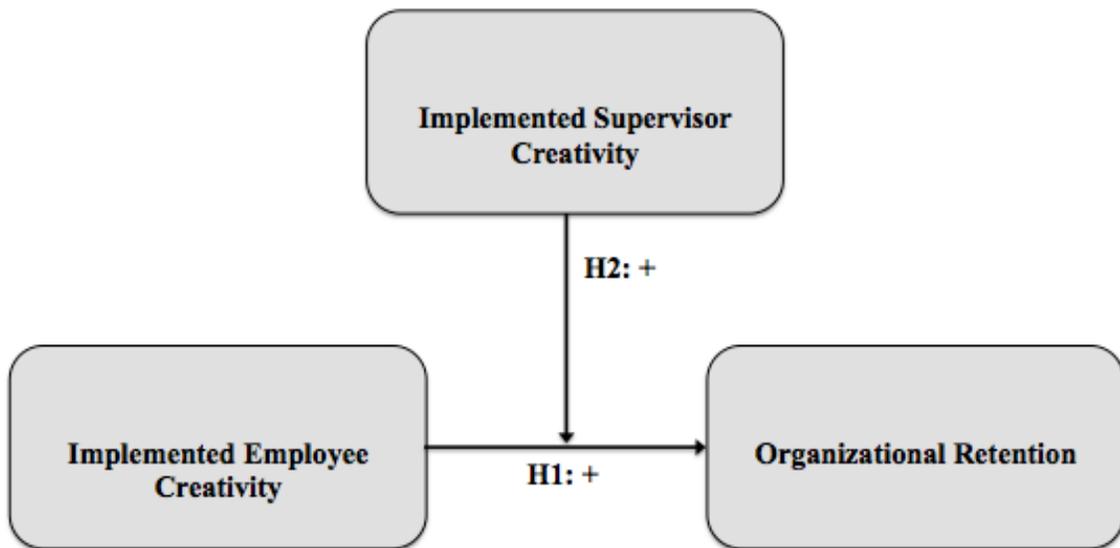
This paper is organized as follows. First, I develop and discuss the current research and theory within creativity and leadership, specifically discussing creativity, leadership within creativity, and their effects on employee retention. Secondly, the hypotheses will be developed, and the study methodology will be presented. Finally, a discussion will include both the reasoning for the results and managerial implications and limitations of the study, as well as suggestions for future research.

REVIEW OF LITERATURE

According to the literature, there are two distinct elements of employee innovation: individual factors and organizational factors. Both factors contribute to the employee retention rate for an organization. Figure 1 displays my hypothesized relationships.

Subsequent sections will detail the current research regarding individual employee creativity and retention and supervisor creativity, with respect to their influence on organizational retention rates.

Figure 1:



Individual Factors: Employee Creativity

Creativity, Innovation and Incentives in the Workplace

Creativity is “defined as the production of novel, useful ideas or problem solutions. It refers to both the process of idea generation or problem solving and the actual idea or solution” (Amabile 2005, p. 368). Tangible creativity is an implication of creativity: it is the combination of the original creative idea and the implementation of the idea. The difference between the idea and the implementation is critical: implementation and creativity are not one in the same, but are two different steps in the innovation process (Baer 2012).

According to Tushman & Nadler (1986), innovation is defined as the “creation of any product, service or process which is new to a business unit” (p. 75). Other research argues “creativity” and “innovation” are interchangeable: the difference simply lies in the emphasis. For the purpose of this study, I will refer to innovation as the change “with the production or adoption of useful ideas and idea implementation” (Scott & Bruce 1994, p. 581). Thus, innovation and creativity implementation will be used interchangeably. Innovation can be divided into two subsections: product innovation and process innovation. Product innovation is change to an organization’s product, which includes incremental, synthetic and discontinuous changes. Process innovation is “a change in the way a product is made or service provided” (Tushman & Nadler 1986, p. 76). This study will focus on process innovation.

Furthermore, there are two general components of creativity: novelty and usefulness (Bratnicka, & Bratnicki, 2013). The Bratnicka & Bratnicki (2013) study suggests novelty and usefulness are two very distinct aspects of creativity in the workplace. Baer (2012) similarly suggests creativity and implementation are two unique aspects. For the purpose of this study, I will look at the usefulness, or implementation of creativity, which is what is ultimately measured in the INI program. I believe implementation of creativity has an effect on employee retention. This study will determine the nature of the effect.

According to Unsworth (2001), there are four types of creativity and different motivations associated with each. Expected creativity is an “expected solution to discovered problem” (Unsworth 2001, p. 291). Proactive creativity is “volunteered solution to discovered problem” (Unsworth 2001, p. 291). Responsive creativity is

finding a “required solution to a specified problem”. Finally, contributory creativity is a “volunteered solution to specified problem”. There are different motivations associated with each type of creativity. Because of the different motivations with each, identifying the creativity type is important in encouraging participation, and particularly to help predict organizational commitment and employee retention.

Strong job identity and commitment typically include job involvement, a strong motivation to perform well, loyalty to the status quo, and, to an extent, conformity to the prevailing practices. Organizational creativity is believed to be a potential trigger for compliance and loyalty, which although it could prevent extreme creativity, may also allow or encourage creative behaviors within a creative company, leading to more incremental improvements (Madjar 2011, p. 733). If organizational creativity is a trigger for loyalty, it should increase employee retention.

According to Scott & Bruce (1994), there is a positive correlation between innovative behavior and leader-participant exchange, as well as a positive correlation between innovative behavior and role expectations. A positive correlation between innovative behavior and role expectations implies innovative behavior is positively correlated with organizational commitment (a component of role expectations). The importance of the leader’s role in influencing the participant will be explored further in subsequent literature.

Outcomes of Individual Innovation

Once implemented, innovation has been shown to have significant implications for employees. Kalmi and Kauhanen (2009) point out the conflicting outcomes of workplace innovations: some argue outcomes include increased discretion, enhanced job

satisfaction and improved job security. Others argue workplace innovation can lead to increased mental strain, job intensity and compromise job security (Kalmi & Kauhanen 2009). According to Kalmi and Kauhanen (2009), workplace innovation is primarily beneficial for employees, which ultimately leads to increased discretion, higher wages, higher job satisfaction and ultimately improved job security. While this is the current research and school of thought on the relationship between job security and workplace innovation, previous research resulted in conflicted conclusions and the Kalmi and Kauhanen's (2009) study is based on a Finnish study and recommends that future research observe this relationship in other countries. My study of the INI program will provide evidence supporting or opposing Kalmi and Kauhanen's research regarding the importance of improved job security.

In their 2013 study, Bratnicka & Bratnicki suggest "organizational creativity is associated with higher level of [the] firm's performance" (p. 156). This implies great potential outcomes for companies implementing organizational creativity: if innovation actually makes the company perform better on other levels, innovation should be implemented. Implementation is a step further than creativity, thus, it is hypothesized that creativity implementation should stimulate organizational commitment and increase employee retention.

Organizational Factors: Supervisor Creativity

Environmental Factors of Innovation

Organizational creativity is defined by four components: "creative environment establishment, creative output generation, member's creative participation, organization's creative integration" (Bratnicka, & Bratnicki, 2013, p. 155). These external components

affect an individual's participation in organizational creativity within the workplace, which affects their organizational commitment and employee retention. Additionally, company culture and employee fit have a large influence on an employee's retention rate. Mahal (2013) shows that employees should be selected according to the job requirement: values, education, experience and personality of the employee should be considered in the hiring process; goals and values of the employee and company should overlap; and training will make new employees feel as if they fit in with the company. All of these actions will affect new hires retention rate (Mahal 2012). Sheridan (1992) shows professionals who are hired with an emphasis on interpersonal relationship values stayed an average of 14 months longer than those hired based on an emphasis of work task values. Both of these studies point towards company culture fit: values and interpersonal connections seem to be the most critical components of success with new hires in fitting into company culture.

Incentives are an extrinsic organizational technique to help bolster company innovation (Tushman & Nadler 1986). General research has historically been negative towards extrinsic incentives, particularly with regards to incentives' effects on creativity (Grabner 2014). Research shows short-term incentives are not beneficial (Tushman & Nadler 1986). However, research does show successful incentives must be based on actual performance and special recognition or rewards for exceptionally innovative employees. These incentives should improve innovation. According to Eisenberger & Shanock (2003), "rewards for novel performance increase intrinsic motivation and creativity, whereas rewards for conventional performance decrease intrinsic motivation and creativity" (p. 121). Essentially, incentives must be distributed with care: incentives

or rewards should only be given for “novel” performance, or performance that exceeds the organization’s standard. In Eisenberger & Shanock (2003), the distribution of rewards “strongly effects innovative performance” (p. 121). Grabner’s (2014) research shows that combining performance-based pay and subjective performance evaluations provide the best employee-evaluation and support for creativity. Grabner expresses the importance of creativity incentives: incentives must not limit creative employees, but purely support and enhance the creativity of employees across the creativity spectrum (from employees whom are more naturally creative to those who are not). Thus, when incentives are given for novel performance, are not short-term focused and incorporate a monetary reward as part of the incentive, it is expected these creativity incentives will lead to higher employee-evaluations, therefore higher organizational commitment and ultimately higher retention.

Establishing clear intentions for creativity is important for encouraging employees to use any intrinsic motivation to implement creative ideas (Eisenberger & Shanock 2003). The Eisenberger & Shanock (2003) study suggests that if individuals believe they will obtain rewards for creativity (if creativity is incentivized), individuals will be more creative. Thus, by being extrinsically rewarded and intrinsically motivated, organizational commitment would increase and employee retention would increase.

According to Shalley (2000), creativity does have an impact on employees’ retention rates in the workplace. Shalley’s research shows the relationship between creative participation in the workplace and an employee’s intent to quit to be very strong. However, this study focuses only on an employee’s intended reaction. The principal contribution of the current study is to show the relationship between employee’s creative

participation and the employee's action of quitting or staying with the company. To date, no study has linked these behaviors.

Supervisors' Effect on Innovation

Yuan & Woodman (2010) tested perceived factors of participation in innovation in the workplace. Supervisor relationship quality had an effect on innovative participation, as did perceived organizational support for innovation, innovativeness as a job requirement, reputation as innovative, and dissatisfaction with the status quo. Most of these factors contributed to three larger umbrella factors: expected image risks, expected image gains and expected positive performance outcomes. Specifically, relationship quality with the supervisor had significant effects on the expected image gains and positive performance outcomes, thus the supervisor's relationship with the employee affects an employee's innovative participation by affecting image and performance outcomes (Yuan & Woodman 2010). With these factors affecting innovation and employee behavior so significantly, it can be expected that this behavior will have large implications for the organization as a whole, potentially impacting employee retention.

According to Basu's (1991) study of blue-collar workers, the quality of the relationship between supervisor and employee is related to innovative behavior (Scott & Bruce 1994). Types of leadership that have proven effective in improving innovation among employees include participative and collaborative leadership styles, leader-member exchange, and role-expectations of leaders. A large determinant of leadership styles is the organizational climate, which determines company culture fit (Tracy 2013).

There are four critical motivators of employees and employers in the workplace: leadership style, organizational climate, reward system, and structure of work (Tracy

2013). However, these are not all independent of one another: leadership style should be determined by the organizational structure, reward system and structure of work. Thus, if employers are motivated by these factors, these may influence leadership style. It is important to understand these factors in an organization and understand different leadership styles and their ability to affect employees' motivation, thus their participation in creative activities and their participation's effect on organizational commitment.

Work structure affects leadership styles: some work inherently requires creativity, high energy, extensive communication, and some is routine, repetitive and carefully monitored (Tracy 2013). Different types of work and work structures should require different leadership styles. Lead-by-example leadership strategy has been difficult to study in current literature due to difficulty measuring the influences of this style of leadership.

Lead-by-example leadership is acting as a role model and practicing behavior expected of employees. Tracy (2013) states that one of the great questions for the leader of an organization is "What kind of company would my company be if everyone was just like me?" (p. 45). This same principle is applied to the INI programs: the participating company spends time motivating supervisors to participate in the INI programs and openly submit a higher number of issues and new ideas in order to motivate their employees. However, the link between a supervisor leading by example and employees' innovation and turnover has not yet been tested.

Using this research, a study has been developed to observe the relationship between workplace innovation and employee retention as well as supervisors' use of lead-by-example leadership to influence employee innovation.

Hypotheses

There is an abundance of research that discusses how creativity is fostered and built. This research highlights implications of creativity and its effect on employee outcomes.

According to Shalley's (2000) research on the relationship between creativity requirements and intentions to leave, participants who worked in environments conducive to their creative requirements according to their jobs, had both higher job satisfaction and were less likely to leave (p. 215). This implies that the balance between work environment structure and job creativity requirements is crucial, particularly for retention of employees as well as increasing creative activity (Shalley 2000). Shalley (2000) drew a direct connection between creativity and intentions to leave, but was unable to test whether employees followed through on these intentions.

Kim's (2009) research suggests similar findings: employee creativity positively influences career satisfaction, which is often a factor of organizational commitment. This study measured creativity amongst those with a proactive personality. In other words, Kim's (2009) study focused specifically on individual, internal creativity rather than organizational creativity.

Further, Baer (2012) suggests the importance of developing creative ideas and implementing creative ideas. Specifically, Baer (2012) finds that implementation requires motivation and action, which often requires the building of relationships or strong connections. These relationships, in turn, strengthen under the pretense that both employees desire to improve the workplace through creative implementation, which creates a strong tie between the employee and the organization, therefore increases organizational commitment and often leads to increased employee retention (Baer 2012).

The current research suggests that creativity, specifically the implementation of creativity, may increase organizational commitment and retention of employees.

According to this research, the following hypothesis has been made:

Hypothesis 1: As employee innovation increases, the likelihood they remain with the organization increases.

Zhang & Bartol (2010) found that leaders' encouragement of creativity increased creative engagement with subordinates. Specifically, empowerment leadership promotes employee creativity. Thus, it is hypothesized that leaders' encouragement of creativity, which increases creative engagement amongst employees, ultimately increases organizational commitment and increases employee retention.

Zhou (2003) studied the relationships between the presence of creative coworkers and creativity amongst employees. The study found that the presence of creative coworkers and decreased "close monitoring" by supervisors promoted employees who are more creative to participate in creative activity (p. 413). However, with "less creative" employees, the study found the combination of creative coworkers and increased developmental feedback from supervisors increased creativity (p. 413). Regardless of whether the employees participating are more or less creative, creative coworkers stem involvement of other coworkers in creative agendas and developmental feedback is beneficial to the creativity of all employees. If supervisors are "creative coworkers", thus using the lead-by-example leadership style by demonstrating creative actions, and provide developmental feedback for creative ideas and implementation (such as the approval process in the INI program), then the supervisor will encourage creativity, and the employee will be more creative.

George & Zhou (2007) supported the Zhou (2003) research and found most creativity in the workplace occurred when supervisors provide a supportive workplace, particularly emphasizing developmental feedback, including being trustworthy and just with employees. Supervisor's moods, both positive and negative, have a positive impact on creativity: regardless of the supervisor's mood, if the supervisor provides a supportive environment, creativity increases. Additionally, Shalley, Gilson & Blum (2009), emphasize the need for a supportive supervisor.

The research implies that supportive, creative supervisors improve employees' creativity, thus increasing employee retention rates. With this research, the study proposes the following:

Hypothesis 2: Supervisors' innovation positively moderates the relationship between employee innovation and retention. As supervisors' innovation increase, the positive relationship between employee innovation and retention is magnified.

METHODS

The INI program is implemented within a large Midwestern metal manufacturing company, with four subsidiary companies. The program requires all employees (with the exception of supervising presidents) to submit and implement at least 8 issues and 11 new ideas in order to claim their quarterly bonus. As mentioned previously, issues are defined as problems the employee sees in his or her workplace that he or she wants to correct. For example, an operator who works in the welding department may notice that product X

welds yield angles that are too acute. To solve this issue, the operator could create a prop that holds the pieces in place during the weld so the angle is the same in each product X.

New ideas are defined as innovations (usually but not necessarily process innovations) for the employee's workplace. For example, a salesperson may realize there is a more efficient way to record customer calls, and may design a new spreadsheet for customer calls. After implementing this new spreadsheet with the department, this new idea would be recorded and the employee would receive credit for it. Issues and new ideas are first submitted to the employee's supervisor. The supervisor approves or edits the issue or new idea, and then the issue or new idea is implemented. The issue or new idea must be implemented for the employee's issue or new idea to count towards their total to allow them to reach their quarterly bonus.

The employee demographic data, employment history with the manufacturing company and participation in the INI program from March 2012 through September 2014 were obtained through the human resources department at the company. The data was analyzed using survival analysis. The following hypotheses were tested:

- H1: As employee innovation increases, the likelihood they remain with the organization increases.
- H2: Supervisors' innovation positively moderates the relationship between employee innovation and retention. As supervisors' innovation increase, the positive relationship between employee innovation and retention is magnified.

The study observed 99 company employees. The sample was derived from a list of 190 employees from the company's human resources department. Employees were removed from the list for a failing to comply with a variety of requirements. Initially, 66

employees were removed from the study if they did not meet the first 365 day requirement, meaning they did not work at the company for the entire period from March 1, 2012 through March 1, 2013. The remaining 124 were then trimmed based on employees involuntarily leaving the company—if they were let go. For example, one employee was let go due to theft. For issues such as theft, 24 employees were removed from the study because they were terminated involuntarily, which left 100 employees. Finally, one employee was removed from the data set because they had missing data. A total of 99 employees remained in the sample group. Among these 99 employees, 25 voluntarily left the company between March 1, 2013 and September 1, 2014.

Measures

Control Variables. Control variables in this study included age, ethnicity and organizational tenure. These variables were controlled to negate any effect they would have on the study's results.

Employee Total Implemented INI. This variable calculates the level of participation the employee had with the issues and new ideas program, which signifies the employee workplace innovation. Specifically, the variable measures the total number of issues and new ideas implemented.

Supervisor Total Implemented INI. This variable directly correlates with H2. Supervisor participation in the issues and new ideas program was calculated the same way employee participation was calculated—it was calculated based on total number of issues and new ideas implemented.

Organizational Retention. This variable directly correlates with H1. This variable measures how long after the 365 day sampling period the employee continued to work at

the company. The employee had to be with the company for the first 365 days, from March 1, 2012 through March 1, 2013. The count of the number of days the employee worked began after this period, starting March 1, 2013 through September 1, 2014, with a maximum of 549 days if the employee was still employed when the study ended September 1, 2014. The study used data from March 1, 2012 through September 1, 2014. Data before and after these dates were not used for the study. The research on the data began after the ending data of September 1, 2014, so the data in a complete and equal set was studied for each employee.

For the purposes of the survival analysis study, organizational retention was measured using an event code. The event tracked was voluntarily leaving the company, coded as “1”. If the employee remained with the company all 549 days, up through September 1, 2014, the employee recorded a “0” because they did not voluntarily leave the company within the sampling frame.

H1 and H2 were tested using the Cox Proportional-Hazard’s Regression for Survival Data (survival analysis). Survival analysis was the statistical method of choice because it uses a semiparametric technique to measure when an event occurs. This event, the dependent variable, which was an employee voluntarily leaving the company in this study, is considered relative to time and the other employees in the sample. Essentially, the survival analysis shows when the employee’s event occurred or shows the employee remained with the company through September 1, 2014. By calculating the effect each of the variables had on the event happening, survival analysis allows me to predict the likelihood of the event happening. Thus, survival analysis shows which variables have the largest effect on the likelihood of the event (the employee voluntarily leaving) and,

using those variables, allows me to predict when current or future employees will leave, relative to the influential variable. This retention prediction is made using number of days. For H1, it is expected the influential variable will be the employee's implemented INI.

H2 expects the relationship between the supervisor total implemented INI and employee total implemented INI to be influential on retention as well. For H2, the variables were standardized, because of their high correlation. H1 was strongly supported. H2 was not supported.

RESULTS

Table 1 shows the mean, standard deviation and correlations between the control, independent and dependent variables. All relationship are as expected. Results are presented first with the survival analysis of employee number of issues and new ideas and employee retention. Secondary results indicate the relationship between the employee number of issues and new ideas and the employee's supervisor's number of issues and new ideas.

Table 2 is constructed to walk through the iterations used in the study. Using unstandardized beta (B) coefficients, each iteration represents a different variable tested. Step 1 tests only the control variables: age, gender and organizational tenure. Step 2 includes the control variables and adds in Employee Total Implemented INI. Step 3 includes the control variables and Employee Total Implemented INI, plus Supervisor Total Implemented INI. Finally, Step 4 tests all of the variables: the previous control and

independent variables as well as the relationship between supervisor total and employee total implemented INI as a moderating effect. Step 4 directly tests H2.

The values shown in Table 2 represent unstandardized coefficients. These unstandardized coefficients are subsequently exponentiated to provide organizational retention likelihood. The unstandardized beta coefficients must be exponentiated to be understood in terms of retention likelihood. Thus, for values that are less than 1, retention likelihood is increased. For exponentiated values greater than 1, retention likelihood is decreased. For example, if the exponentiated value is 0.90, 0.90 is subtracted from 1, to get 0.10. Which, when converted to percentage, leads to 10% increase in retention likelihood.

Table 3 shows the practical implications for the results for H1 in Table 2. Specifically, Table 3 shows the impact of an employee additionally implementing 1, 5, 10 or 12 issues or new ideas annually. As shown by the chart, if an employee implemented one more issue or new idea a year, it is expected that the employee's retention rate would increase by 5% (as shown by $Exp(B)=0.953$). If an employee implemented one more issue or new idea a month, for a total of 12 annually, it is expected that that employee's retention rate would increase by 44% ($Exp(B)=0.56$).

Table 3 shows the impact of H1. The table takes the unstandardized beta (B) coefficients from Table 2 and calculates the effect of these values using exponentiation. Using different additional units, Table 3 shows the exponential impact of the beta and the effect on retention likelihood. The units are in terms of additional implemented INI annually.

Table 1
Correlations and Statistics for Study of Variables (N=99)

Variable	M	SD	1	2	3	4	5	6
1. Age	36.81	10.52	-					
2. Gender	0.79	0.41	-0.09	-				
3. Organizational Tenure	1474.46	1819.10	0.64**	0.00	-			
4. Employee Total Implemented INI	48.73	53.92	0.00	0.00	0.14	-		
5. Supervisor Total Implemented INI	44.43	34.60	0.21*	0.07	0.14	0.15	-	
6. Organizational Retention	472.61	152.36	0.30**	-0.14	.29**	.35**	-0.04	-

Notes: 2. Male = 1, Female = 0. 4. & 5. Total of issues and new ideas implemented. 6. Number of days remaining with the company after the base period.

*p < .05. **p < .01.

Table 2

Results of Survival Analysis (N=99)

Predictors	Step 1 (B)	Step 2 (B)	Step 3 (B)	Step 4 (B)
Age	-0.02**	-0.01**	-0.01**	-0.01**
Gender	0.69	0.94	0.92	0.90
Organizational Tenure	0.00**	0.00**	0.00**	0.00**
Employee Total Implemented INI		-0.04**	-0.04**	-0.05**
Supervisor Total Implemented INI			0.01**	0.00**
Supervisor Total X Employee Total Implemented INI				0.00**
ΔR^2		24.07**	0.786	0.06
Total R ²	10.21*	23.09**	24.85**	24.87**

Notes: Gender Code: Male = 1 Female = 0. Total: Total of issues and new ideas implemented.

*p < .05. **p < .01.

Table 3

Impact of H1 (N=99)

x = -.048	Total Additional Units	Exp (B) Impact	Retention Likelihood
$e^{(-.048)}$	1	0.95	5%
$e^{(5X-.048)}$	5	0.79	21%
$e^{(10X-.048)}$	10	0.62	38%
$e^{(12X-.048)}$	12	0.56	44%

Note: Additional unit is one additional implemented issue or new idea annually

Results for Organizational Retention and Creative Participation

Hypothesis 1 tested the relationship between an employee's participation in the issues and new ideas program and the employee's retention rate. Specifically, H1 predicted a higher participation in the INI program (implemented creative participation or innovation) would increase the employee's retention rate. The hypothesis was strongly supported, as show in Table 2.

Table 2, step 2 specifically shows the significance of the employee's participation in INI. H1 is strongly supported, as shown by $B=-0.04$ ($p<0.01$), which indicated highly significant results. Thus, I can conclude that that employee's innovation participation has a significant impact on the employee's retention.

Results for Creative Participation and Supervisor

Secondly, I hypothesized the higher the participation of an employee's supervisor in the issues and new ideas program, the higher the participation of the employee in the issues and new ideas program. The hypothesis was not supported.

The data was not supported because the interaction between supervisor's and respective employee's number of issues and new ideas did not have a statistically significant correlation with the employee retention. The beta coefficient $B=0.00$ proved the interaction was not significant.

DISCUSSION

The key focus of the study was to determine the relationship between organizational retention and employee creative participation (H1). The secondary focus was to determine the effect of a supervisor's creativity on employee retention (H2).

The results strongly support H1 and do not support H2. The data shows employee total number of issues and new ideas implemented strongly affects employee retention. Results do not indicate a statistically significant relationship between supervisor's number of issues and new ideas and employee's number of issues and new ideas.

Although H2 was not supported, there was a positive correlation between employee total of INI and supervisor total of INI, yet it was not deemed a significant result using common statistical decision points. The study as a whole was very conservative. For example, the sample was chosen based off of extensive requirements, including a full year of work with the company to qualify for the study.

Contributions to Theory and Research

This new understanding that H1 provides has several implications, for the academic world, the greater workplace and for the company. This study contributes to several theories researched, specifically to Shalley (2000). Shalley's research indicated that there was a relationship between an employee's participation in implemented workplace creativity (innovation) and their intentions to quit. This study takes Shalley's research one step further, building on the attitudinal measures and intentions Shalley studied. Specifically, it contributes to the data by showing an employee's actions rather than just intentions. This study supports Shalley's research and confirms that if an employee does participate in creativity initiatives within the program, they are less likely to quit. The study contributes by proving there is a dynamic relationship between employee creativity and retention by providing employee behavior, beyond just intentions. The study proves employee behavior in the workplace does have valuable

implications, specifically regarding employee retention. This study adds actual employee behavior research to the current pool of data.

This is the first study of its kind to research actual employee creative and turnover behavior. By comparing historic participation in the INI program and comparing it to historic human resource data regarding employee actions using survival analysis, this study is the first to show that participation in creativity programs actually increases employees' retention rates.

Practical Contributions

This study has many practical implications as well, both for the workplace as a whole and for the manufacturing company specifically. This study shows that creativity programs similar to the one studied can decrease turnover costs, training costs, keep company knowledge within the company and increase the company's innovation by increasing retention rates through creative participation. According to the data, the bottom line should be immediately improved by the implementation or increase of participation in these programs. Such programs and implementation provide a healthy workplace for employees to succeed in the long run.

For the Midwestern manufacturing company specifically, acting on this evidence is pertinent. Because the company already has a program and system in place, the company simply needs to encourage participation within the program. This can be done through several methods. The company could implement a system that rewards supervisors for the participation of their employees. The company could incorporate more issues and new ideas training into current training programs. Additionally, in weekly

company meetings, the President could highlight one implemented issue or new idea for the week, and encourage others to implement their issues and new ideas.

By incorporating creativity in the workplace, companies have the potential to directly impact their bottom line. For example, at the Midwestern company, encouraging employees to implement one additional issue or new idea a month should increase retention rates by 44%, decreasing turnover and time spent in the hiring process while retaining valuable employees and improving both the efficiency and effectiveness of current employees. Furthermore, it should increase the employees' connections to the workplace and make the workplace a much more productive area. Increasing retention rates by 44% should decrease turnover costs by roughly 44%. This direct implication to the bottom line coupled with happier, more committed employees and a more innovative, productive workplace more than justifies the use of creativity programs in the workplace.

Limitations & Future Research

H2 was not confirmed. Upon inspection of the data, there were several instances where supervisors were terminated who had employees with high number of issues and new ideas. I believe these cases influenced results. I believe these outliers and additional cases where team leaders working for company presidents, who do not participate in the INI program, caused H2 to not be supported.

Tracy (2013) could potentially justify the lack of support for H2. Tracy's study defines the difference in relationships between one who has a repetitive job, and one whose job requires more independence and creativity. The results indicate that the employees who held more repetitive jobs may have had a stronger relationship (and more parallel creative participation results) with their employee.

I believe that a larger study with participants that all followed the same supervisor-employee relationship could potentially shed more light on the subject. Specifically, if this were to be repeated, I recommend more study participants with identical formal relationships with their supervisors be used when testing the relationship predicted in H2. As mentioned, the study was constructed extremely conservatively. A future study could make the required time working for the company three months or six months, rather than the year required by this study. This would widely expand the sample size and may give different results for H2.

Using the current study, subsequent analysis could be encouraging from the results of H2. Future research could simply expand the sample participants, as mentioned above or could focus only on the operators' relationships with their supervisors (the blue collar employees' relationships). Additional future research could observe the difference between issues and new ideas implemented. For this study, issues and new ideas implemented were lumped together for simplicity purposes when applying retention rates. However, future studies could observe the different effects employees contributing issues versus contributing new ideas have on retention.

Observing the fine grain difference between issues and new ideas implemented could lead to fruitful discussion on the difference between reactive and proactive creativity. Similarly, a study looking at the difference between those ideas implemented and those ideas not acted on could directly show the importance of implementation in the innovative process. Additionally, future studies could observe creativity and retention patterns using a diverse group of companies to make up the sample size, which would help increase the size of the sample.

This study does have a few limitations. The study was conducted at four companies, all under the same parent company. Furthermore, the limited number of participants could affect the results of the study. However, the strength in the support in our results still represents a strong argument. The study used very conservative results and cases in order to run a conservative test.

Despite these limitations, the study makes important contributions to the current literature on creativity in the workplace and has many practical implications for the manufacturing company and the greater workplace.

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