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DOES THE MEDIATING EFFECT OF INTRINSIC MOTIVATION IN AN ORGANIZATIONAL ENVIRONMENT MAKES ANY DIFFERENCE IN ITS INNOVATIVE PERFORMANCE?

Khaliq ul Rehman¹, Ghulam Ghouse², Aribah Aslam³, Maqsood Ahmad⁴, Sana Raza⁵

¹Quaid-i-Azam University, Islamabad, Pakistan

^{2,3,5}Economics Department University of Lahore

⁴Economics Department Government Post Graduate College, Sheikhpura

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ABSTRACT

Despite the huge body of research focused on intrinsic and extrinsic motivation, the effects of these motivators on innovative performance, their mediating effect have been scarcely investigated. Mediating effects of intrinsic motivation factors, along with employee knowledge can be seen as synergistic motivators when they have a positive effect on achieving a competitive edge. The study used probability sampling technique comprising mostly of southern Punjab higher education institutes for a sample of 169 responses. While the estimation process, this research adopted the mediation analysis approach developed by Baron and Kenny (1986) and found that there is a significant relationship between organizational climate for innovation and organizational performance. Results confirmed that the effect of the organizational environment for innovation is positively significant to intrinsic motivation.

INTRODUCTION

The synergistic intrinsic motivators in an organization may have the capacity to foster organizational innovative performance, particularly of their intrinsically motivated knowledge employee. It is critical to developing an enabling environment that catalyzes an innovative environment for employees in an organization (Nasifoglu et al., 2020; Luqmani et al., 2017; Nybakk & Jenssen, 2012; Deshpande & Farley, 2004; Patterson et al., 2004). Similarly, Isaksen and Ekvall (2010) described that innovation is considered a key point in organizational environments where planned management direct and manage

organizations. More especially, Kissi et al. (2012) find out that the internal environment encouraging innovation in an organization is stated as an organizational environment for Innovation (OCI) and it is not possible to improve the performance of an organization for the sake of competitive advantage without heavily relying on innovativeness.

Isaksen and Ekvall (2010) also explained the scenario by claiming that an organizational environment for innovation is supported for change and creativity; describing that the focal point of innovation management provides an appropriate environment where at least employees can easily manage and share each other's point of view. Concluding from organizational environment theory, this endeavor will investigate the mediation role of intrinsic motivation on the association between the organizational environment for innovation and organizational performance.

Intrinsic motivation can be explained as the understanding of someone's skills and capabilities. People who are intrinsically motivated must possess the ability to use different learning strategies and multi-faceted reasoning. That is why intrinsically motivated people are most expected to be more creative and innovative to respond to organizational goals. Therefore, people are related to intrinsic motivation with different level of tendency, but there is still need of extrinsic motivators which can provide support to manage and continue this level of tendency (Ryan & Deci, 2000). Deci and Ryan (1985) have developed the Cognitive Evaluation Theory (CET) for, which explains the elements affecting intrinsic motivation and determines the variations in the motivation level.

According to the Cognitive Evaluation Theory, when there are appropriate conditions, intrinsic motivation would be rise. The main point of Cognitive Evaluation Theory (CET) are the fundamentals of autonomy and competence, and it also collects the findings of different researchers against the special effects of feedback, communication, rewards, and some other extrinsic factors on internal motivation. Whereas intrinsic motivation increases the better contests, productive responses, and avoidance from critical assessments, but it decreases from destructive feedbacks related to performance. Intrinsic motivation does not increase competence without autonomy support (Deci & Ryan, 1985; Ryan & Deci, 2000). Crespell and Hansen (2009), and Nybakk and Jenssen (2012) have been identified the impact of OCI and organizational performance (OP) that are technically related to each other. Employees' commitment will measure the organizational performance.

Employee commitment can be defined as different three meanings; (i) Cognitive means the knowledge of employees about the organization. (ii) Emotional means employee feelings about the organization, its management approach, objectives, and values. (iii) Behavioral means employees' desire towards certain behaviors regarding the organization (Juchnowicz, 2010).

These all kinds of employee commitments have presented performance and employee involvement in the organization. Moreover, employees must possess complete knowledge about the strategy and objectives of the organization.

They must have identification company value and expectations toward them. Those employees who are willing to do the work on their imitativeness, even though bearing convenience, expense, taking any changes as opportunities (Juchnowicz, 2014)

The objective of the study in hand is to clarify the open research question about the mediating effect of intrinsic motivation on the organizational environment for innovation and organizational performance in context of unique sample, which has not been found in any significant body of literature. Intrinsic motivators are probed out as their role of mediators (Grant & Berry, 2011; Amabile & Pratt, 2016; Deci et al., 2017). The first section consists of the introduction of the study. The second section describes the literature review with the help of related past studies. Section third describes the Model and Methods and section four states the conclusion and policy guidelines.

Literature Review and Hypotheses Development

This section focuses on the studies to investigate the interesting variables and mediating role of intrinsic motivation in the organizational environment for innovation and organizational performance.

Specification of the proposed model

Macey and Schneider (2008) find out that extraordinary level of employee involvement in the innovation process proceeds for employees' discretionary effort which, in turn, provides better organizational performance (OP). Bommer and Jalajas (2004) focuses on the theory of resources and capabilities which presents that organizations need capabilities, resources, competence, and a high level of technological facilities for implementation of innovation plan setting that will be critical for business rivals to imitate, and organizations are pursuing competitive ecological advantages and try to attain better organizational output. Moreover, Brown and Leigh (1996) investigated that an organizational environment that gives motivation and vastly involvement of the employee has a greater impact on performance.

Organizational environment for innovation

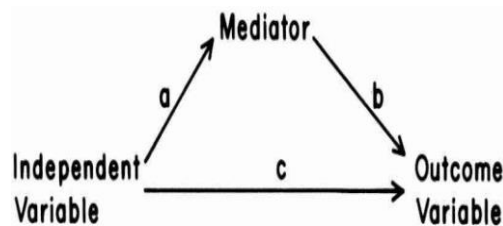
OCI has been measured as a central point for organizational success and individual level innovativeness and creativity as a key element for innovation at the organizational level (DiLiello and Houghton, 2006). Furthermore, an organizational environment can have a positive impact on change, creativeness, and modernization in organizations (Amabile, Conti, Coon, Lazenby and Herron, 1996; Cooper, Edgett, and Kleinschmidt 2004; Nybakk, Crespell, and Hansen, 2011). The higher management is required to confirm that the environment of organizational encourages, enhances, and nurtures creativity at the individual level (DiLiello and Houghton, 2006; Hunter, Bedell, and Mumford, 2007; Isaksen and Lauer, 2002). Employees exert innovation at the maximum level when they have innovative and creative potential with greater support from their organizations (DiLiello and Houghton, 2006). Importantly, if any, of the organization is trying to build up

such an environment in an organization where individuals supposed it positively; this most probably results in greater employee engagement, involvement, and motivation which leads to better OP.

H1. Organizational environment for innovation is positively related to organizational performance.

Intrinsic motivation (IM)

As per Baron and Kenny (1986), there are some conditions that can support mediation analysis. Initially, the independent variable must be showing a considerable relationship with the dependent variable, predicting the mediator variable. Thirdly, the mediator variable must have a substantial impact on the outcome variable. Finally, the influence of the independent variable on the outcome variable must be a rise or substantially condensed after the impact of the mediator has been considered.



Path Model for Mediation Test (Baron & Kenny, 1986)

This model presents a three variable path model, in which two variables affect the outcome variable. The outcome variable is directly influenced by the independent variable which is termed as path c. Importantly, the mediator variable has an impact on the outcome variable which would be called path b, and the mediator variable is influenced by the independent variable ultimately which is considered path a. Intrinsic motivation means internal tendency which is used by individuals to raise their capabilities and identifies new things. Also, individuals act from the very beginning of their lives for the interests and aspiration learning without considering any external benefits (Ryan & Deci, 2000). Moreover, Individuals are intrinsically motivated when they try to find their tasks for the sake of entertainment, attention, or greater satisfaction level which arise by desire, self-expression, and critical challenges. On the other hand, resource allocation and employee support, etc. as innovative environment characteristics sustain intrinsic motivation and innovativeness, particularly in powerful, innovative environment intrinsic motivation decrease with time pressure, as they try to control autonomy of individuals (Hsu & Fan, 2010).

H2. Intrinsic motivation is positively related to organizational performance

Organizational performance (Employees' Commitment)

Organization asses to increase their efficiency, flexibility, and responsiveness because of the most critical challenges confronted by domestic and international competition to respond to the dynamic nature of the global

business world. (Reuvers, Van Engen, Vinkenburg, and Wilson-Evered 2008; Dorenbosch, Van Engen, and Verhagen, (2005)

Employees' commitment can measure organizational performance. There is an intense change in the global business world, competition and constantly customers changing requirements increase the significance of the employees' commitment concerns now a day. It is treated as an expansion in organizational performance and its competitive environment (Gruman, Saks, 2011). Identification and utilization of opportunities are dependent on the employees' commitment. If we do not capture this aspect, there would be a chance of a bad decision-making process and an ultimate increase in organizational failure (Frankovsky, Istvanikova, Stefko, 2009). Rypina (2009) concluded that with more employee commitment there would be a positive impact of business performance in the organization, robustness in efficiency and productivity as well as better associations with customers.

Organizational environment is referred to the work environment that fulfils means and systems accepted by organizational participants for the sake of organizational functioning performance. It has been discussed that employees' mutual perceptions for an organization's operational policies and practices. If the theory of environment were explained at the level of individuals, it would be termed as psychological environment. When we analyzed environment at the aggregate level, it is named as organizational environment (Isaksen, Lauer, Ekvall & Britz, 2000-01). Chinho Lin (1999) discussed mutual norms and methods by individuals at the group level and environment as mutual values and conditions about organizations.

It is stated that organizational innovativeness discussed in various aspects, e.g. Operations, marketing, and entrepreneurship. Previous literature analyzed organizational innovation from two standpoints. One is that innovation is a kind of learning. Peters and Waterman (1982) explained that innovation is a method to react to some changes in the organizational environment. Whereas Rogers (2003) and Tushman and Nadler (1986) described that innovation relates to a new way, strategy, design, and product or services in any organization. But at the same time, some other scholars find innovation as a multi-directional trait in the organization.

The specific tools related to intrinsic motivation result from the work content and its nature. It tells about the elements such as independent environment at workplace, job nature, job importance from employee's point of view, involvement, innovativeness, job sharing, using knowledge, capabilities, and skills of any individuals, and effective feedback regarding employees' performance level (Mottaz, 1985). It is also analyzed that tools of intrinsic motivation, encourage employees regarding job contents (Dündar, Özutku and Taşpınar 2007). Mottaz (1985) finds in employees' motivation study in the service sector of the United States that an employee's motivation strongly influenced by using tools of intrinsic motivation.

According to Deci & Ryan (1985) intrinsic motivation reveals individuals decide to participate in such accomplishments which have the maximum

desire they can take but not from other new means. Innovation is considered a proficient part of an effective firm (Chen, Lee, Tsui, & Yu, 2012). The term innovation is still showing confusion with the invention despite its significance. The word innovation is a new thing that describes worth for any entity (Saunila & Ukko, 2012). Innovation is defined as a radical or incremental change. Whereas incremental innovation construct upon present capabilities is associated with little changes in current services (Inauen & Schenker-Wicki, 2012). In comparison, radical innovation showed improvements for new services and strategy for arranging and providing services (Mustafid & Anggadwita, 2013). In short, changes either incremental or radical define the uniqueness (UN, 2010).

Organizational performance is considered as a central key point for measuring the success of any organization and a significant variable in a research study of management (Stegerean & Gavrea, 2010). Organizational performance explains the organization's achievements about the market and financial objectives (Lakhal 2014). According to Lawler and Porter (2008), performance is identified as a function of individual's level of effort, skills, and competencies in a specified situation. West and Farr (1989) stated that innovativeness' is a quality that is treated as a common trait among the management team and professional workers. Furthermore, Nybakk and Jenssen (2012) explained more in detail that innovativeness would be sanctioned in the assisting environment. Baer and Frese (2003) agreed on the more deliberated explanation of innovativeness followed by different researchers (Denison, 1996; Hurley & Hult, 1998). Baer and Frese (2003) describe innovativeness is instantly predictable in an environment of the organization due to its cultural aspects.

H3. Organizational environment for innovation is positively related to intrinsic motivation.

H4. Intrinsic motivation mediates the relationship between organizational environment for innovation and organizational performance.

The Models and Methods

Sample and Procedure

The population for this present study is the faculty of higher education institutes, mostly focuses on the southern Punjab higher education institutes i.e. The Islamia University of Bahawalpur, COMSATS University Vehari Campus, Bahauddin Zakariya University, Multan, University of The Education university Vehari Campus, University of Agriculture Faisalabad sub-campus Burewala Vehari, and Bahauddin Zakariya University Multan sub-campus Vehari. A sample of 169 is used for this study out of 169 questionnaires was distributed in various universities.

The target population is chosen because it has been found that less research on the site where intrinsic motivation plays a role as mediating variable in the

relationship between Organizational environment for innovation and organizational performance. The sampling technique that is used in this study is probability sampling because the population is known so we will use probability sampling and further probability sampling is divided into which we will use simple random sampling. A pilot test will be conducted among a few employees to ensure questions, and the survey items are easy to understand for common people.

The gender of respondents, with 71% being Male (n = 120) and 29% were female (n = 49). Most respondents were between the ages of 22- 30 (46%) followed by the age group of 20-30 years (28.2%), respondents between the ages of 36- 40 accounted for 46% and those who are above the age of 50 years, accounted for 3.4%. The education level is found for the majority of respondents was a bachelor degree: 13% (n = 22), Master degree holders: 26% (n=44), and those with post-graduate qualifications 52% (n= 88). In terms of years in service with their organizations, 55% from 1-5 years is 55% (n = 93) had served for 5-10 years, 31% (n = 52) for 10 years or greater, 14% (n = 23).

Measure

Primary data collected through questionnaires, mailing, observation, and telephonic interviews. Organizational environment for innovation is measured by using Situational Outlook Questionnaire' (SOQ) with the English version of Isaksen, Lauer, and Ekvall (1999). Ekvall (1983) established a model for the organizational environment which is based on nine sub-scales. These sub-scales are (i) idea support (ii) trust (iii) freedom (iv) idea time (v) conflict (vi) risk-taking (vii) challenge (viii) debate and (ix) playfulness. The Cronbach α scores of 0.92 are reported for this scale. The organizational performance is measured through employees' commitment by using a scale of employees' commitment used by Irefin and Ali (2014). The intrinsic motivation levels of employees is measured through nine items "The Intrinsic Motivation Scale" taken from the study of Mottaz (1985) by Dündar, Ozutku (2007).

In the first section of the questionnaire respondent's personal information will be asked but respondents name will not be asked for the secrecy point of view. The relevant questions related to care, e.g., teaching or nonteaching, designation, gender, experience, qualification, and the institution will be asked. The second section of the questionnaire will be about variables information. SPSS (Statistical Package for Social Sciences) IBM statistics 20 programs are used for statistical data analysis of this study. The analysis is used to explain the impact of organizational environment for innovation on organizational performance with the mediation effect of intrinsic motivation. Previously, testing the structural model, we established data analysis to check the reliability by using coefficient indices of Cronbach's alpha. It is noted that reliabilities of the variables lie within the range of 0.84 to 0.91 with coefficients of Cronbach's alpha. There is found coefficients result more than 0.7 will represent a high level of reliability.

Data Analysis Procedure

The mediation analysis developed by Baron and Kenny (1986) is employed to test the hypothesis in this study. A hierarchical regression analysis is also used to regress intrinsic motivation on organizational environment for innovation and organizational performance, to test hypotheses 1-3. Also, to justify the significance and indirect effect of mediation in hypothesis 4, we can also use Judd and Kenny (1981) approach in which the difference between two regression coefficients is required. β_2 is the partial regression coefficient of equation (1), which is subtracted from β , obtained from the simple regression coefficient of equation (2) as;

$$\beta_{\text{indirect}} = \beta - \beta_2$$

$$\text{Organizational Performance} = \beta_0 + \beta_1 (\text{Organizational environment for innovation}) + \beta_2 (\text{Intrinsic Motivation}) + e \quad (1)$$

$$\text{Organizational performance} = \beta_0 + \beta (\text{Organizational environment for innovation}) + e \quad (2)$$

Mediation Analysis

Mediation has been widely studied in the social sciences. There is no doubt that the relationship between the expected variable (X) and a criterion variable (Y) does not mean when a third variable is announced into the model. The reason for this may be a function of the third variable as an intermediate variable. According to Baron and Kenny (1986), the mediator is considered as a variable that is the source of dependent variables and independent variables. We accept the error term is normal and multivariate distributed. It is noted that the third variable effect can be explained in two different ways. Either it is taken as the difference between two regression parameters i-e indirect effect (c – c') or as the multiplication of two parameters of regression ($\alpha \beta$). In the case of adopting the first method, we have to follow two regression equations for the estimation purpose.

Model 1:

$$Y = d_1 + cX + \varepsilon_1$$

Model 2:

$$Y = d_2 + c'X + \beta M + \varepsilon_2$$

Model 3:

$$Y = d_3 + \alpha X + \varepsilon_3$$

In which,

Y is considered as result variable, X is a Independent variable, M is as a mediator. The C is the (total effect) of the code and, C' (direct effect) is the

coefficient with no results matched to the results of the mediators which is shows to ε_1 , ε_2 and ε_3 . The intercepts are d_1 , d_2 and d_3 .

In case of adopting second one method, we have to follow two regression equations for the estimation purpose (models 2 and 3). Because the indirect effect can be calculated by multiplying the coefficients of the (β) from the 2nd model and the coefficients (α) from model 3.

Baron and Kenny (1986) approach

Baron and Kenny (1986) presented four stages for the analysis of mediation test.

Stage 1: Preliminary variable is associated with the resulting variable (Model $Y = X$).

Stage 2: Preliminary variable is associated with the mediating variable (Model $M = X$).

Stage 3: Mediator affects the resulting variable (Model $Y = M X$).

Stage 4: To found that variable M is fully mediated the (X-Y) association, the outcome of (X) IV on (Y)

DV monitoring for variable M must be zero (path c' test and estimated). The effects shown in both 3 and 4 Steps are expected in the similar equations of regression. If there is found all four steps at the same time, the data is explained as dependent on the hypothesis that M variable between X and Y would be a mediator. If it meets first three stages, stage 4 is not achieved then it is called partial mediation.

Indirect effects

Sobel (1982) test is used to find the level of effect on a dependent variable from the mediating variable. It is assumed that there is no chance of measurement error and normality. According to Goodman (1960) and Aroian (1994), indirect effects exert various standard errors. The Hayes method (2010) is also evaluated and it examines the dependent variables (Y) and independent variables (X) with the help of mediating variable (M) to find indirect effects from bootstrapping method. Initially, Hayes (2004) used the method of bootstrapping to find the indirect effects.

Results

Table 1 describes descriptive statistics OP, OCI, and IM. Table 2 in the appendix represents descriptive statistics for variables through the bootstrap procedure. The result shows the midpoint of the original sample and bootstrap. However, the standard deviation is smaller than the original sample in bootstrapping. Table 3 in appendix displayed pairwise Pearson correlation of variables. The results show a positive correlation impact between organization

performance, organizational environment for innovation and intrinsic motivation to examine the mediation effect (Baron and Kenny method), three regression equations are used for any said purpose. Firstly, the result (Organizational performance) is regressed on the predictor variable (organizational climate for innovation). This relation is significant ($c = .54$ ($p = 0.03$)).

Considering above, we analyze both equations (1) and (2). In the analysis of the equation (2), the mediating variable (IM) is regressed on the predictor variable (Organizational environment for innovation). The result predicts significant relationship between the mediating variable (intrinsic motivation) and the predicting variable (Organizational environment for innovation) ($\alpha = -19$ ($p = .01$)). In the analysis of the equation (3), we regressed the outcome variable (Organizational performance) instantaneously on the mediator variable (intrinsic motivation) and predictor variable (organizational environment for innovation). The results showed previous significant association between predictors (OCI) and outcomes (OP) remained significant ($c = 0.54$ ($p = .03$)). Thus, there is no significant evidence of an association between predictor (OCI) and dependent (OP) as mediator effect (Figure 1 and Table 4 in the appendix). Table 5 in the appendix presents two different types of tests, which are known as Sobel and Aroian to study the indirect impact of the original sample. All the tests show that the statistical significance result ($P = .0121$ and $.0128$ respectively) indicate that there is an indirect effect. The data reveals that correlation techniques verify the relation of all variables with each other. 0.451 showed that organizational performance observed a positive and significant relationship with the organizational environment for innovation. The value 0.492 showed the presence of intrinsic motivation positive and significant impact on the organizational environment for innovation. Similarly, 0.627 showed that intrinsic motivation has a positive and significant impact on organizational performance (for details see table 4).

Conclusion and Policy Recommendation

The important findings for this research lead to some implications for practitioners who desire to establish organizational environment with innovativeness for individuals. Human resources policies of any organization should be associated with its predefined goals for long-lasting results. For the said purpose, the new system and structure should be formalized for the development of awareness programmes and autonomy that create practical work with innovation. For the innovative environment, organizations must pursue supportive and energetic employees for managerial positions who can easily develop a dynamic environment for idea sharing.

Importantly, results of this study provide strong establishments for organizational environment for innovation with strong understandings for intrinsic motivation and its greater impact on organizational performance with employee's commitment.

There are some limitations to this research. First of all, this study is conducted on the faculty of higher education institutes of southern Punjab instead of

complete provincial or state setting. Results of this research study were self-reporting from teaching staff; they can be different from choosing other populations. Measurement of organizational performance was taken perception based instead of economic-based due to the inconsistency of economic information source because employees had no direct financial information sources.

Future research studies can use qualitative approach for data collection with open-ended interviews, or mixed methodologies of quantitative and qualitative which may provide strong analysis results. Also, sample size can be large; this would provide strong data analysis. It may be interesting enough to consider teaching and non teaching staff members at the same time. Amabile et al., (1996); Carmeli & Spreitzer, (2009); Yuan & Woodman, (2010) describes that despite these recommendations, it can use potential mediating variable employee engagement and employee involvement.

APPENDIX

Regression Results According To Baron& Kenny Method

Table 1: A measure of centre and dispersion for variables

Variable	N	Mean	Std Dev	Minimum	Maximum
OP	165	3.4497	4.86	5.83	28
OCI	165	3.3905	5.15	12	40
IM	165	3.7101	53.92	0	200

Table 2: A Measure of Centre and Dispersion for Variables Using Bootstrap

Variable	N	Mean	Std Dev	Minimum	Maximum
OP	5000	3.4497	3.7101	22.27	24.79
OCI	5000	3.3905	1	33.35	36.05
IM	5000	3.7101	1.06	31.08	57.38

Table 3: Pair wise Pearson Correlation

Variab les	Mean	SD	1	2	3	4	5
OCI	3.3905	1.1292	-0.105	-0.002	.195*	1	
		2	0.173	0.984	0.011		
OP	3.4497	1.2194	0.062	-0.033	-0.11	.530**	1
		4	0.422	0.674	0.153	0.00	
IM	3.7101	1.0600	0.091	0.027	.195*	.530**	
		8	0.238	0.725	0.011	0.00	1

Model 1: OP = OCI (Y=X)

Model	Coff Name	Coff	t stat	R2	Adj R2	Sig level
Direct effect (OP — OCI)	OCI	0.541	7.987	.35	.32	0.03

Model 2: IM = OCI (M=X)

Model	Coff Name	Coff	t stat	R2	Adj R2	Sig level
Direct effect (IM — OCI)	OCI	.195	2.564	.38	.32	.011

Table.4: Model3. OP = OCI IM (Y = X M)

Model	Coff Name	Coff	t stat	R2	Adj R2	Sig level
OCI — IM — — OP	OCI	0.034	0.501	.282	.273	0.617
	IM	0.523	7.81			0.00

*p < 0.5; **p < 0.01

Figure 1: Mediator Model

Motivation (IM) as mediator of organization Performance (OP) to Organizational Climate for innovation (OCI)

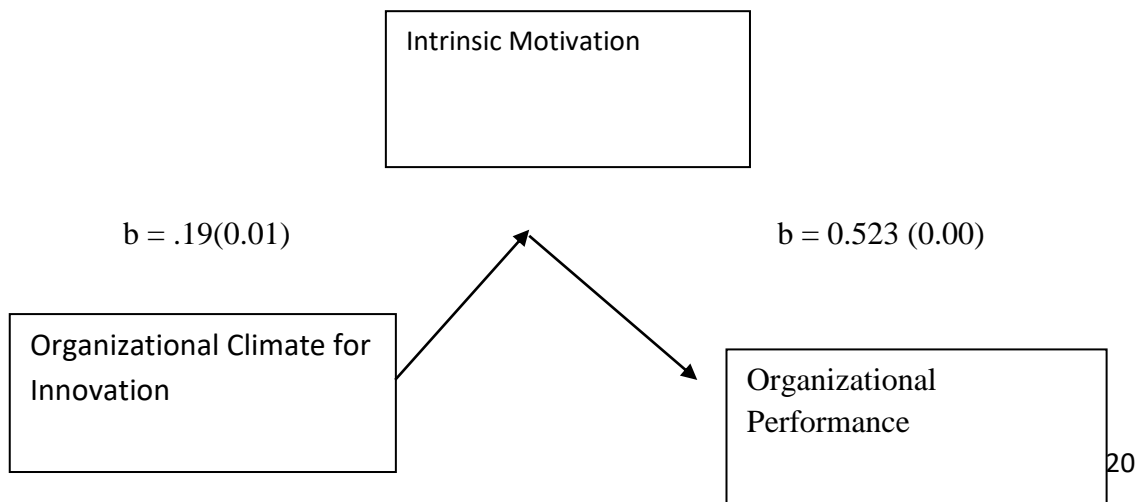
Step: 1

b = .54 (p=.0001)

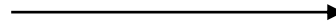
Organizational Performance (OP) ----- to Organizational climate for innovation (OCI)

Step 2 and 3:

Figure1: Motivation (IM) as mediator, Organizational Performance (OP) to Organizational climate for innovation (OCI)



0.541(0.03)



Indirect Effect = C-C' = 0.54-(0.52) = .018

Table 5: Indirect Test Results

OCI(X)Coeff Model M=X	Standard error (X)	IM(M) Coeff Model y = X M	SE(M) Model y = X M	Total Effect	Sig level
0.195	0.071	0.52	0.077	0.54	0.011
Standard error total effect	Sobel Test	P Value of Sobel test	Aroian Test	P value	
0.083	2.50934	0.0121	2.48845	0.0128	