

A Mediating Effect of Occupational Health & Safety Standard between Organizational Innovation and Business Performance

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Abstract: The main purpose of this study is to explore the mediating role of occupational health & safety standard relationship between organizational innovation and business performance. Secondly, in order to get achieve this core objective of predictor direct and indirect relationship estimate on business performance. Methodology in this study was constructed mainly on the basis of quantitative method, where quantitative research estimated of essential to recover the knowledge base and measurement of vital aspects regarding the characteristics of management tools into test the hypotheses. This study has conducted been by stratified random sampling in which data were collected from Bangladesh ready-made garment factories. Data has been collected by survey questionnaire instrument. The data used that obtained from primary sources of survey questionnaire method. There are three hypotheses have been developed through literature review that tested using through correlation and liner regression analysis executed by SPSS 20.v software. Findings-while execution of survey data the mediating impact of occupational health & safety standard, it was found that statistically significant and positive impacts on the relationship between organizational innovation and business performance improved. Both predictors are highly correlation of each other with business performance to the significant and positive relationships. Recommendations- Further studies including with other standards can combine together to test and verifying the structural equation model concerning of measurement model and structural model fits.

Keywords: Organizational Innovation, Occupational Health & Safety, Business Performance.

INTRODUCTION

Economic progress and expansions has the main purpose nowadays for developing country such as Bangladesh here is remarkable outflow decline of organizational innovativeness challenges compare to other South Asian countries in the manufacturing sector. Occupational health & safety standard is changing from the previous strategy practices that are something different than other, either from internal or external of the organization. Although, innovation has become a general term, numerous of today's organizations still discover innovation indefinable is being said regarding innovation contribution for misunderstanding. But one of the most recognized innovation is three different such as an outcome innovation, process innovation, and attitude innovation. Where is an outcome innovation highlights what output is required to product innovation, process innovation, marketing innovation, business model innovation, supply chain innovation, and organizational innovation [1]. The effective innovation actually is improving continuously such as technology or management standardization of quality, environment, and health & safety standard for the organization that is critical factor

of any organizational competitiveness [2]. Therefore, practicing of occupational health & safety standard actually it is depending on the existing issue on particular organization need to adopt certain standards in order to make ensure that working area is healthier & safety places for the workers. Because occupational health & safety standard is influencing on employee intension strategy and that is ultimately improving employee performance, whereas; management should be financed on the protection of employees' health and safety issue within organization [3]. Health & safety standard is for the encloses determination improving access of the industry and practical knowledge apply to the organization leaders to demonstrate continuous improvement for the performance measurement strategy [4]. There are three pillars of economy, social, and environment improving sustainable progress that become reliable to the relation at workplace safety & health development. These pillars, having sustainable progress can be assured by considering workplace health & safety innovation of internal and external of the organization. The execution of these pillars are reduce the working environment accidents and disease through healthy people, safer workplace, minimize cost

of accidents, organized environment, managed workplace accidents and overall better workplace safety awareness to adopt international standard of OHSAS18001 [5].

The aim of this study is to explore the mediating role with occupational health & safety standard between organizational innovation and business performance. This core objective in this study is through literature review, empirical research on innovativeness of Bangladesh ready-made garment factories by stratified sampling method performed by liner regression analysis.

LITERATURE REVIEW

There is a big debate how much of innovation be encouraged and hard works required, but the solution lies somewhere in the middle, says management thinker Peter Drucker. He argues that innovation is an actual effort that can be managed like any other corporate role. Innovations based on different knowledge tend have been the greatest effect on the marketplace, but it frequently takes periods before the ideas are interpreted into actual products, processes, or services [6]. Past researcher had identified on innovation at the organizational level has characteristically been concentrated on general innovation development phase or innovation management concept of the transformation business performance and organizational innovation systems [7]. Innovation is the key in dynamic for creating sustainable firm's competitive advantage [8]. It is firm's necessity to make sure workplaces well-being and safety environment to make employees contentment having better job performance because employees and productivities are interrelated to each other for the business performance. Consequently, different alignments of captivated capacity and organizational innovation environments lead to improved business performance [9]. Accordingly, from the above argument then it may recommend that hypothesis:

H1: There is a significant and positive relationship between organizational innovation and business performance.

It does contain sustainability improvement not only making the financial performance at the same time likewise environment become capable to assure that workplace more safety & healthier. Innovation is rapidly attractive democratized [10], as it is increasing day by day the challenges from a corporate agenda and forces the firm's to adopt the OHSAS18001 standard at the workplace and continuously implementing of this standard. Therefore, past few decades, sustainable innovation has captured a high-level position on the agenda of numerous firms, thus it is broadly defined as an innovation that is considering environmental and social issues and even for the essentials of future

generations to be safe [11]. Any performances are dependable to someone or something enhancing of ability, motivation, and opportunity with high performance work practice is a significant relationship to the business performance through of multifunctional activities such as workplace health & safety environments [12]. It has been investigated the mediating effects are conducted on the relationship between organizational innovation and business performance [13], though product innovation and technology innovation make big advantages in the competitive market but for the organization to be focused on employee's who are taking care about making the quality products and services. So, from above argument then it may recommend that hypothesis:

H2: There is a positive and significant relationship between organizational innovation and occupational health & safety standard.

Innovation is a significant discipline for the sustainable growth of any country. One of the most and current issue of health safety issues which is brings essential change on the workers' in the environment, thereby improving the productivity of the companies. Most of research and discussion about innovations are concentrated on product development or process improvement, but unfortunately ignoring workplace and service innovation [14]. In the earliest industrial countries they have been adopted the latest technology innovation or the product process innovation which is made them such like fourth generation phases. Where are such like developing country they are still struggling on innovation either organization or product. Globally one of the most vital issues among the management system standards are workplace healthier & safety for the employee's to make ensure working place is safe and reliable. On the other hand, there is a significant relationship with finished products and employee's contributions during the production process. It has been found that employee safety intentions make on job satisfaction and then it finally to increase the performance of the business finished products. The sustainable growth is not only believe in a box without improvement some of the pillars, that growth becomes reliable in relation to workplace health & safety improvement innovation for all internal and external individuals those who are involved at work [15]. Thus, from above argument then it may recommend that hypothesis:

H3: There is a significant and positive relationship between occupational health & safety standard and business performance.

Therefore, the vital connection is correct infrastructure for the innovation collaboration; the movement of thoughts between dissimilar innovation

performers, and access to knowledge is all gradually significant elements of innovation. It called innovation ecosystems, which has become more difficulties and constructed on more national to international level of simulations and knowledge marketplace [16]. So, from above two factors are organizational innovation and work-place health & safety innovation become a significant productivity towards business performance. Employee's atmosphere is satisfying on their daily job at same place makes them happy regarding health & safety onward automatically employee's performance will be increased. The significance of different types of innovation for firms' performance through directly or indirectly [17]. Therefore, the process of innovation has traditionally been understood as a predefined

categorization of stages: idea generation, selection, development, and launch for distribution and sales. Demonstration upon contingency theory, it argues that process of innovation may monitor a number of different pathways [18].

So, from the above literature review the research framework have been developed in this study. Research framework showed that organizational innovation can be effect on the business performance both directly and indirectly through to work place innovation in the role of health & safety standard. The conceptual framework could be viewed following the three hypotheses generate between of their relationships.

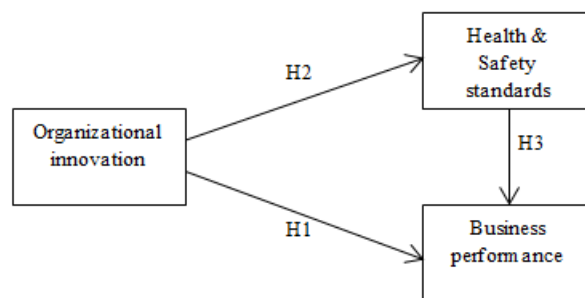


Fig-1: Conceptual Framework

RESEARCH METHODS

This study is leading a quantitative method. Quantitative research is estimate of essential to recover the knowledge base and measurement of vital aspects regarding the characteristics of management tools into test the hypotheses [19]. The data used that obtained from primary sources of survey questionnaire method. Sampling techniques used through random sampling from the Gazipur district of Bangladesh. The target population in this research is ready-made garment (RMG) industry and respondents are mid-level to senior manager who is the relevant knowledge for the current study of daily working operation such as compliance managers, process managers, service managers, and human resource managers. The survey questionnaire was conducted physically to collect the data from total numbers 48 RMG factories were surveyed with 168 questionnaires distributed. Finally the total number of 137 questionnaires has been received by the end of survey. Regarding of this study, there are three variables studied that are namely-organizational innovation, business performance, and health & safety standard as mediating. Where organizational innovation is an exogenous variable and endogenous variables are health & safety standard and business performance. Organizational innovation practices items measured based on process and service innovation, health &

safety standard and business performance measured by human resource performance. All of the items measured by Likert scale 5 points from strongly disagree to strongly agree with middle point as a neutral counting response. Therefore, at the first were made to ensure all the items are reliable and valid. In this study a correlation analysis has performed to analyze the relationships between all variables and mean and standard deviation also calculated for the variables. Later correlation determinations have been calculated then liner regression analysis was performed to determine the effect of characteristics of companies concerning organizational innovation and organizational performance with mediating effect of health & safety standard. Linear regression has been performed because it is suitable to calculate between single independent variable and single dependent variable without any group analysis as well as sample size.

Data Analysis

Before conducting of the main analysis the questionnaires interval level has measured to confirm the adequacy of sample test and the strength of indicators relationship through KMO and Bartlett's test of Sphericity [20, 21]

Table-1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin measure of sampling adequacy.		0.912
Bartlett's Test of Sphericity.	Chi-square approx.	2275.704
	df	105
	sig.	.000

Source: Author (2018, SPSS data analysis).

Measuring of KMO sampling adequacy result is 0.912 which is close 1 and more than 0.5 and Bartlett's test of Sphericity sig. at .000 levels which is less than 0.001, and then sampling value is adequate. Accepting value of KMO examination is 0.50 or more and if the value between 0.5 to 0.7 is medium strength correlation and 0.7 to .08 and more than value is good with Bartlett's test of correlation required $p < .05$ [22, 23].

Performing KMO and Bartlett's test then examining the reliability and validity implemented because it required testing and confirming desirable value of alpha (α), as it is a sign of internal consistency. Alpha value required to greater than or equal to 0.70 and alternatively if alpha is more than 0.80 then highly desirable [24]. The collected survey data tested and following table 2 given values of all three variables of Cronbach's alpha, mean score, standard deviation, and correlation.

Table-2: Reliability, mean, standard deviation, and correlation outputs

Variables	Cronbach's alpha (α)	Mean Score	Standard deviation	1	2	3
1. Organizational innovation	0.91	3.76	0.9868	1.0		
2. Health & Safety standard	0.87	3.63	0.9545	** .835	1.0	
3. Business performance	0.93	3.91	0.9612	** .831	** .773	1.0

** Correlation among variables is significant at the level of 0.001 with 2-tailed.

Source: Author (2018, SPSS data analysis).

Above table-2 reliability are more than desirable value and with accuracy by SPSS software which has showed highly reliable of three constructs survey questionnaire as consistence to each other and homogeneous. Assessment of correlation analysis output results given all variables have positive and statistically significant relationships at the level of 0.001 with 2-tailed Pearson correlation between predictors and organizational performance. Secondly, the analysis of liner regression models (summary

model-1, model-2, and model-2) for the regression explores carried out in direction to get measure concerning organizational innovation as an independent variable and business performance being as a dependent variable with mediating effect of health & safety standard variable is as follows accordingly:

Model-1: Linear regression analysis between organizational innovation (predictors) and dependent variable of business performance.

Table-3: Summary of model 1

Model Summary	R	R ²
Model 1	.831 ^a	.691
ANOVA ^{a1}	F	Sig.
Regression	302.295	.000 ^b
Coefficients ^{a2}	T	Sig.
Constant	4.779	.000
Organizational innovation	17.387	.000

^a. Predictors: (Constant), organizational innovation.

^{a1}. Dependent Variable: business performance.

^b. Predictors: (Constant), organizational innovation.

^{a2}. Dependent Variable: business performance.

The best predictor's indicator in the explanatories degree of the liner regression model is to R² during hypotheses testing. In the above model summary tables provides two values of R and R². Where the value of R has given the simple correlation

0.831 and that indicates the degree of correlation between variables. Next value of R² is indicating on how much of the total difference in the dependent variable and result, the concept suggest that business performance has influenced through 69.1% by predictor

(organizational innovation), therefore, rest of the causes by others factors, (100% - 69.1% = 30.9%). In the line of ANOVA summary, which has indicated that how well the liner regression calculation fits the survey data between predicts to the dependent variable. So, the results indicate that the liner regression model predicts significantly well with the business performance. The coefficient summary actually provides the necessary information to predict dependent variable from independent variable and on other hand, it determine whether independent variable (predicts) can contributes statistically significant to the model. Therefore, the value of this model were showed significance of 0.000 which was <0.05. So, for the decision making it could

conclude that the liner regression model-1 analyzed the organizational innovation has statistically significant with positive effect on business performance. Thus, increasing the organizational innovation in the business to adopt a technological or others standards then it will also improve of the business performance.

So, the hypothesis H1: There is a significant and positive relationship between organizational innovation and business performance is accepted.

Model-2: Linear regression analysis relationships between organizational innovation and health & safety standard.

Table-4: Summary of model 2

Model Summary	R	R ²
Model 2	.835 ^a	.697
ANOVA ^{a1}	F	Sig.
Regression	310.842	.000 ^b
Coefficients ^{a2}	T	Sig.
Constant	3.374	.001
Organizational innovation	17.631	.000

^a. Predictors: (Constant), organizational innovation.

^{a1}. Dependent Variable: health & safety standard.

^b. Predictors: (Constant), organizational innovation.

^{a2}. Dependent Variable: health & safety standard.

Above model-2 correlation degree stronger between variables the value of R has been showed simple correlation 0.835 and which is indicated the grade of correlation between organizational innovation and health & safety standard. The value of R² has specified the total notion in the dependent variable result. The concept suggest that health & safety standard has influenced through 69.7% by organizational innovation (predictor), and, rest of the 30.3% reasons might have by others factors, (100% - 69.7% = 30.3%). Therefore, the outcomes indicate that the liner regression model predicts significantly sound with health & safety standard. The coefficient summary provides the value in this model were showed significance of 0.000 which has <0.05. So, for the assessment point the liner regression model-2 analyzed

the organizational innovation has statistically significant with positive effect on health & safety standard. This analysis suggest that, increasing the organizational innovation in the business to adopt such as occupational health & safety toward improved workplace more healthier & more reliable for the employee's satisfaction which is ultimately increased productivity for the entire business.

So, the hypothesis H2 output indicates that, there is a positive and significant relationship between organizational innovation and health & safety standard is accepted.

Model-3: Linear regression model summary between health & safety and business performance.

Table-5: Summary of model 3

Model Summary	R	R ²
Model 3	.773 ^a	.598
ANOVA ^{a1}	F	Sig.
Regression	200.575	.000 ^b
Coefficients ^{a2}	T	Sig.
Constant	5.217	.000
Health & safety standard	14.162	.000

^a. Predictors: (Constant), health & safety standard.

^{a1}. Dependent Variable: business performance.

^b. Predictors: (Constant), health & safety standard.

^{a2}. Dependent Variable: business performance.

From above model-3 degree of correlation showed stronger between variables, the value of R has given simple correlation 0.773 and that is indicated the degree of correlation between health & safety standard and business performance. The value of R^2 has specified the total view in the dependent variable result, the concept suggest that business performance has influenced through 59.8% by health & safety standard (predictor), and, rest of the 40.2% reasons might have by others factors, (100% - 59.8% = 40.2%). Therefore, the results indicate that the liner regression model predicts significantly sound with business performance. The coefficient summary also provides the value is significance of 0.000 which has <0.05. So, for the calculation point of view the liner regression model-3

analyzed the health & safety standard has statistically significant with positive effect on business performance. So in this analysis proposed that, make sure the workplace health & safety in the working area that improved for the employee's satisfaction which is ultimately increased business performance.

So, therefore hypothesis H3 is also indicated that, there is a significant and positive relationship between health & safety standard and business performance is accepted. Bellow the table-6 shows that about research hypothesized relationships among latent variables and figure-2 also showed that relationship is statistically significant effects.

Table-6: Summary of research hypothesized relationships

Hypotheses	Paths	Path coefficients	t-statistics	Results
H1	OI → BP	.831**	4.779	Accepted
H2	OI → HS	.835**	3.374	Accepted
H3	HS → BP	.773**	5.217	Accepted

**Significant at level of 0.01

Note for: Organizational Innovation (OI), Business Performance (BP), Health & Safety (HS)

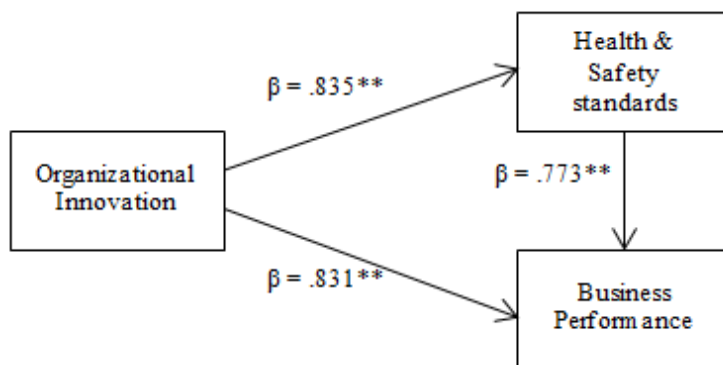


Fig-2: Structural model with standardized estimates parameters

Note: β =path coefficients relationship with a causal link among model; **denotes significant at level of $p < 0.001$

Above figure illustrations the results of this modeling analysis and tested of three hypotheses effects between latent variables. A coefficient (β) has showed for the each of path link that is standardized regression with statistically significant and positive effects.

CONCLUSION

With a modern industrialized environment is increasing the competition hub becoming more and more from corporate agenda demands to make sure the environments are safe and reliable from internally and externally. Where, the business is most important factors to increase the competitiveness only but also to ensure the employees and society. This competitiveness is different than other as not only to have the latest technological innovation and product or process innovation but social responsibility ultimately improved the business performance sustainability, as health & safety standard. From above analysis were showed that

health & safety issue applied properly then level of the business performance to be increased. Presently, modern world with business performance not only is coming from financial point of view as well as performance coming to implement such as management standards certify and make sure to continuously implementing. So, it has been conducted in this study about occupational health & safety standard practice toward sustainable performance. The result showed that there are statistically significant and positive partial relationships among the predictors on the business performance. As a consequence, the company can make more profits by implementing of internal innovation such as health & safety standard. Because the employee's impressions is well then job intension strategy will be reduced and which will make ultimately of reduce overhead costs by training and development for the new employee's before joining the job. Therefore, organizational innovation and health &

safety standard has contributed to the business performance directly and indirectly improvement.

In the liner regression analysis approved that established the effect of innovation in business (organizational innovation and health & safety standard) performance. It was also provided the results about innovation constructs affected with higher degree correlation on business performance. Where, manufacturing companies should be certified of health & safety standard regarding on their employees for the satisfaction on their job through internal environment and then it needed to implement continuously to improve through top management commitment. From the view of this study results, it is likely to say that organization desire to improve their performance should perform more emphasis on employee's satisfaction. So, if the ready-made garment factory adopts of occupational health & safety standard at the workplaces then the results would be linear and desirable ahead headed excellent.

LIMITATIONS

Limitations are in this study is exploratory conducted and only one districts of sampling data were observed for the measured of the business performance. Even there was other zone which was same important for the investigation on this particular area. It is important to explore in the rest of part in the industrial zone verifying further exploration. Further studies including with other standards can combine together to test and verifying the structural equation model concerning of measurement model and structural model fits.

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