

# The causal relationship of business innovation training and development, and job satisfaction of SME manufacturing in Palembang

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## ARTICLE INFO

### Article history:

Received 10 February 2015

Revised 23 March 2015

Accepted 10 April 2015

### JEL Classification:

M12

### Key words:

Job Satisfaction,  
Micro and Small Manufacturing  
Enterprises,  
Training and development,  
Innovation.

### DOI:

10.14414/jebav.v18i1.384

## ABSTRACT

The aim of this research is to explore causal relationship among business innovation, training and development, and job satisfaction of micro and small manufacturing enterprises' managers in Palembang city South Sumatera. An explanatory study uses path analysis to explain quantitative data. Data were collected from 335 sample managers of the enterprises by distributing self-developed questionnaires. The method of considering quantity of sample is random sampling. The results show that innovations have an effect on training and development, and training and development has a significant effect on job satisfaction. On the other side, innovations have no effect on job satisfaction. Innovations include raw materials, production processes and products offered. Job satisfaction include feelings of pleasure and enjoy, feeling calm and not be concerned about, do not ignore the feelings of the faithful, and the feeling of belonging and defend jobs.

## ABSTRAK

Tujuan penelitian ini adalah untuk mengeksplorasi hubungan kausal antara inovasi bisnis, pelatihan dan pengembangan, dan kepuasan kerja manajer manufaktur usaha mikro dan kecil di Kota Palembang Sumatera Selatan. Penelitian ini menggunakan analisis jalur untuk menjelaskan data kuantitatif. Data dikumpulkan dari 335 manajer sebagai sampel perusahaan dengan menyebarkan kuesioner yang dikembangkan sendiri. Metode dalam menentukan kuantitas sampel adalah random sampling. Hasil penelitian menunjukkan bahwa inovasi berpengaruh terhadap pelatihan dan pengembangan, dan pelatihan dan pengembangan berpengaruh secara signifikan terhadap kepuasan kerja. Di sisi lain, inovasi tidak berpengaruh terhadap kepuasan kerja. Inovasi meliputi bahan baku, proses produksi dan produk yang ditawarkan. Kepuasan kerja meliputi kenyamanan dan rasa senang, perasaan tenang dan tidak risau, adanya kepercayaan, dan rasa memiliki serta mempertahankan pekerjaan.

## 1. INTRODUCTION

In Indonesia, the economic crisis began in 1998 and has later on paralyzed business activities. As a result, the fire of employment had occurred in almost all industries. It also led to high operational costs for the company, and as consumer purchasing power decreases so that the goods and services produced by the industry were not able to sell on the market. Micro, small and medium enterprises (SMEs) spread to all corners of Indonesia (Bhasin & Venkataramany 2010). SMEs are proven to have a strategic role and contribute to economic growth in

Indonesia during this plight (Supriyanto 2006). SMEs also had contributed to the social and economic life include: (1) the development of innovation, (2) the impact of the work, (3) the ecological impact, (4) development of local products, (5) regional decentralization, and (6) capital mobilization (Sasin in Samitowska 2011).

More specifically, Palembang is the capital of South Sumatra province which is divided into 16 districts and 107 villages. The competitiveness of SMEs in this province is still low compared with the actors in other provinces, such as in Java, al-

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though the potential of SMEs in South Sumatra seems to be big enough. The total number of SMEs in the city of Palembang is around 30,000 units, as of January 1 - March 31, 2013 there were 9747 units in Palembang SMEs registered with the details of as many as 469 units of micro-enterprises, small business 7484 units, 1,794 units and medium-sized enterprises, and nearly 50 percent in it are engaged in trade in food (Disperindagkop Palembang in Palembang Post 2013).

As Guo (2013) suggested, innovation has a vital role in maintaining basic competency capacity that can continue to survive in intense competition. In this case, innovation can be defined to be a new quality that is embodied in products and processes (Hauschildt in Alfirević et al. 2011). If the application of innovation in SMEs has been good, it can make all aspects of the work to be more effective and efficient and bring about job satisfaction. In order to realize the innovation in products and processes in SMEs, it is important to conduct a training and development for managers of SMEs itself.

Training and development is a very important function in human resource management in addition to staffing, compensation, health and safety, and the employment relationship (Mondy 2008). Training not only enhances the skills, knowledge, and experience of employees, but also gives employees the opportunity to learn their job retention virtual and do competently and increase company productivity (Nadeem 2010). Robins & Judge (2007) explains that the indicators of employee satisfaction can be determined based on four things: (1) a sense of excitement and enjoy the work, (2) a feeling of calm and not be concerned about a job (3) feelings of the faithful and not ignore the work, and (4) feeling maintain and defend their work and do not let the condition gets worse.

The purpose of this study is to determine the direct and indirect influence of innovation efforts on job satisfaction mediated by training and development. The purpose described in the formulation of the problem that includes: (1) Is the business innovation directly affects job satisfaction manufacturing SME managers in the city of Palembang, (2) Is the business innovation indirect effect on job satisfaction mediated by training and development manager of SMEs in Palembang.

## 2. THEORETICAL FRAMEWORK AND HYPOTHESES

Hauschildt in Alfirević et al. (2011), in relation to SMEs, innovation is said to be a step indicated by a

new quality in the production process and products offered. With its innovation, production process involves computers and sophisticated machines which can certainly make SMEs more competitive. The existing work and management functions are performed in SMEs will be more effective and efficient.

Process and product innovation can lead to job satisfaction for SME managers themselves in completing the work. The work that is innovative with the help of computers and advanced machines can facilitate the work of managers and make more effective and efficient and ultimately can also create job satisfaction. In addition to the processes and products, innovation is also followed by innovative raw materials in running SME. Therefore, to obtain good raw materials, SME manager may get satisfaction in managing SMEs. The SME managers who takes this role is not only as a manager, but also the leader and the owner can also certainly get the job satisfaction when innovation has been implemented well in their business.

Hypothesis A1: The higher the innovation effort, the higher the job satisfaction of manufacturing SME managers.

Training is an important strategy for organizations to assist employees in acquiring the knowledge and skills needed to be adapted to the environmental challenge (Goldstein in Babaita 2011). Innovation is a challenge of the environmental aspects of the organization. The existence of the necessary innovation will certainly lead to the need for training and development itself. Training and development itself is influenced by existing innovation in SMEs. With a good innovation will certainly have an impact on the implementation of the training itself, which includes the processes, objectives, methods, and existing delivery systems.

HA2a: The higher the business innovation, the higher the quality of training and development of the manager of manufacturing SMEs.

The training and development is indicated by the process, purpose, method, and the delivery system (Mondy 2008). With the process, goals, methods, and good delivery system in the SME, they certainly have an impact on job satisfaction of the SME managers themselves. According to Locke in Toker (2011), job satisfaction is a pleasant emotional state resulting from the appraisal of one's job as the achievement of value work. Robins & Judge (2007) explains that the indication of job satisfaction can be determined from four things: (1) feeling happy and enjoys his job, (2) a feeling of calm and not be concerned about employment, (3) loyalty and do

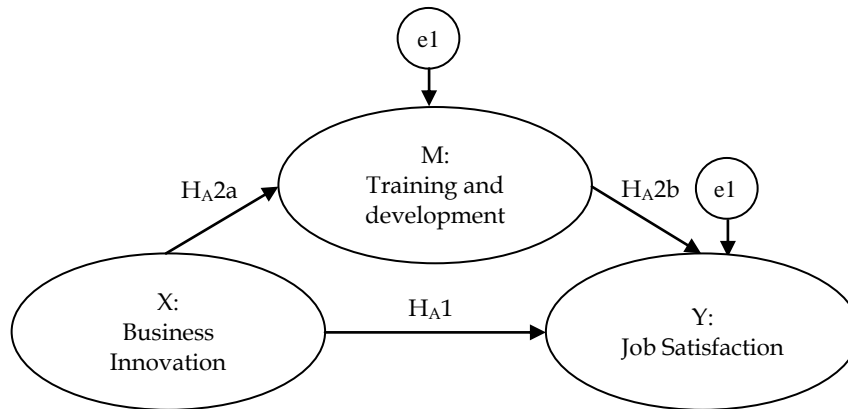


Figure 1

**Causal Relationship between Business Innovation, Training and Development, and Job Satisfaction**

Source: Developed by the authors based on the combination of the concept of innovation (Alfirevic et al. 2011), training and development (Mondy 2008), and job satisfaction (Robins & Judge 2007).

not ignore the work, and (4) preservation and defense of the work.

Ha2b: The higher the quality of training and development manager, the higher the job satisfaction of manufacturing SME managers.

The direct causal relationship of business innovation and job satisfaction managers, and indirect relationships between business innovation and job satisfaction is mediated by training managers and development managers as it is drawn in Figure 1 that is the theoretical framework.

**3. RESEARCH METHOD**

This study had been done for 7 months, from February to September 2014 with the sample of 335 SMEs in 16 districts in Palembang. The explanatory analysis approach was used for describing the formulation of the problem. Each variable was tested by testing the model proposed causal relationship between exogenous variables (independent) to the variable (endogenous) dependent.

Approach to analyze every problem in this research is done quantitatively by statistical program SPSS 19.0. Its exogenous variables (independent: X) is the innovation effort, his intervening variables (mediator: M) is a training and development manager, and its endogenous variables (independent: Y) is the manager satisfaction. The third variable is measured by assessing indicators in that is quantitatively by using a Likert Scale (1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5: strongly agree) that is subsequently processed by using regression analysis to obtain results that can be explained by quantitative.

The number of population covers all SME managers engaged in manufacturing spreading throughout 16 sub-districts in the city of Palembang.

The total number of SMEs engaged in manufacturing (population) is about 2,245 units. The number of respondents in is based calculations Table Krejcie and Morgan (Sekaran 2006) that is equal to 335 (SMEs). The sampling method used is simple random sampling. Sampling with Simple Random Sampling is done for the condition in which each respondent (the elements that form the population) are given the same chance of being selected into the sample.

The primary data were collected directly through field survey by researchers assisted by the field workers. Secondary data were obtained from the company's Web site on the Internet, research journals, and books. Primary data were collected using a questionnaire developed by the authors that were distributed to all a sample of respondents. To know the profile of the respondents, the contents of the questionnaire included questions include: business name, manager of age, sex managers, education managers, and managers working hours per week. After this, the researchers try to find the answers of respondents to the variables measured through indicators are formulated into the questions in the questionnaire, a scale of measurement is based on a Likert scale, from strongly disagree (1) to strongly agree (5). The number of inquiries for business innovation variable that is 3 eggs, training and development variables are 4 items, namely job satisfaction variable 4 grains. The data have been collected are then tested to the validity and reliability test to get into the late-valid and reliable to-late every question in the questionnaire.

Regression analysis using path analysis (path analysis) was used to estimate the causal relationship between the direct and indirect variables

**Table 1**  
**Regression Analysis of Training and Development**

Coefficients<sup>a1</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 Constant	.710	.685		1.036	.301
Business Innovation	1.058	.058	.708	18.308	.000

a. dependent variables : Training and Development of Manager  
 Source: Processed Data.

**Table 2**  
**Regression Analysis of Job Satisfaction**

Coefficients<sup>a2</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 Constant	15.088	.520		29.019	.000
Business Innovation	-.089	.062	-.110	-1.443	.150
Training and Development	.150	.042	.275	3.622	.000

a. Dependent variable: Job Satisfaction  
 Source: Processed Data.

proposed. In the regression analysis performed tests that include statistical test t ( $H_a: b_i \neq 0$ ) and the statistical test F ( $H_a: b_k \neq b \neq 0$ ), classical assumptions: normality requirements, the requirements of the model fit, and each model fit the data. The assisted quantitative data processing was done by computer program SPSS for Windows version 19.0.

#### 4. DATA ANALYSIS AND DISCUSSION

Among the 335 respondents, only 326 who responded to questions about the age of the business and the highest frequency are in the business age that is of 10 years and below. Only the 322 responded to the question about the age of the respondent and the highest frequency at the level of the respondents aged 40 years and below. Next is that only the 325 who responded to questions about sex and highest frequency of male gender. Of the 335 respondents only 305 who respond to questions about the level of education and the highest frequency at high school education level. And, only the 300 who responded to the question of working hours and the highest frequency at the level of 40 hours or less.

Based on the validity of the test result, it was found that all the questions that exist in all the variables are declared invalid by the above correlation coefficient  $r$  table ( $> 0.197$ ). In the innovation variables, the indicator of raw materials has the value of 0.84, 0.96 production processes, and product 0.933. In the variable of training and development, process, the indicators are of 0.799, 0.966 method, 0.974 goals, and system delivery

0.971. In job satisfaction variables, indicators of pleasure and enjoy the work, quiet and do not mind .669, do not ignore the feelings of being faithful and 0.731 jobs, a sense of belonging and defending of 0.703 jobs.

Based on the results of reliability test, it was also found that that all the questions that exist in all the variables are also declared reliable because the value of Cronbach Alpha was above 0.70. For variable-its innovation, the Cronbach Alpha is of .907, training and development of 0.966, 0.709 job satisfaction. All are presented in Table 1.

From the regression analysis using path analysis (path analysis), it was found that the unstandardized beta values in the influence of innovation on the training and development is of 1.058 and significant at the 0.000 value which means that innovation affects training and development efforts.

Furthermore, the unstandardized beta value is noted that innovation affects job satisfaction with the value of -0.089 to 0.150 significance which means it is not significant when ( $> 0.05$ ). The unstandardized beta value in the training and development affects job satisfaction with the significant value of 0.150 at 0.000, which means training and development affect job satisfaction. This is shown in Table 2.

Based on the results of path analysis, business innovation does not have a direct effect on job satisfaction. In the indirect effect, through the mediating role of training and development, it is known that the unstandardized beta  $(1,058) \times (0.150) = 0.1587$ , the total indirect effect of  $0.1587 + (-0.089) = 0.0697$

(> 0.05) thus it is not significant.

The value for the unstandardized beta value of 0.1587 is then tested with Sobel Test (calculate standard errors of coefficients indirect impact) to determine its significance.  $Sp2p3 = 0.51$ ,  $t = 0.1587 / 0.51 = 0.311$ . Therefore, the t value is smaller than t table (0.311 compared to 1.9679). In this condition, it can be concluded that the coefficient 0.1587 of mediation shows no significant effect.

Innovations in SMEs in Palembang have no effect on job satisfaction. Innovations include raw materials, production processes, and products offered, and job satisfaction include feelings of pleasure and enjoy, feeling calm and not be concerned about, and do not ignore the feelings of the faithful, and the feeling of belonging and defend jobs. It does not support the hypothesis that A1 has been proposed (the higher the innovation effort, the higher the job satisfaction of managers of manufacturing SMEs).

Innovations in SMEs in Palembang have an effect on training and development. Training and development includes the process, goals, methods, and systems delivery. It supports the hypothesis that A2A has been proposed (the higher the innovation effort, the higher the quality of training and development manager of manufacturing SMEs).

Training and development for SME managers in Palembang has a significant effect on job satisfaction. This evidence supports the hypothesis that has been proposed A2b (the higher the quality of training and development manager, the higher the job satisfaction of manufacturing SME managers).

## 5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

It can be generalized as the following. First of all, business innovation has no direct effect on job satisfaction of the SME managers in of Palembang. The indirect effect of business innovation on job satisfaction, training and development is proved that it doesn't have insignificant role as mediation.

Secondly, in managing the training and development of SME managers, it needs considering the aspect of innovation of raw materials, processes, and products offered. In managing job satisfaction of the SME managers, it also requires to examine the aspects of human resource management and other organizations. This is to be done, in addition to business innovation and training and development.

Based on the above evidences, it is important this research to be developed by other researchers in the same field in the future to test other similar variables that either directly or indirectly affect job satisfaction. For example, the variable of motivation, organizational commitment, and the like. In addition, it is also important to reveal examine the research object in SMEs and trade services, not manufacturing. Besides that, this study deals with manufacturing SMEs, it did not include the SME of the services and trades.

## REFERENCES

- Alfirević, et al. 2011, 'Innovation capacity as a competitive advantage of small firms in Croatia: an empirical analysis', *The 9<sup>th</sup> International Conference: "Challenges of Europe: growth and competitiveness - reversing the trends"*, pp. 1-17.
- Amstrong, 2009, *Amstrong's handbook of human resource management practice*, 11<sup>th</sup> edition, Koganpage, USA.
- Bhasin & Venkataramany, 2010, 'Globalization of entrepreneurship: policy considerations for SME development in Indonesia', *International Business & Economics Research Journal*, vol. 9, no. 4, pp. 95-103.
- Guo, 2013, 'How to improve the independence innovation capacity in medium-small enterprises? Taking the case of Henan province as an example', *Journal of Applied Science*, vol. 13, no. 17, pp. 3426-3430.
- Huang & Yu, 2011, 'Entrepreneurship, process innovation and value creation by a non-profit SME', *Management Decision*, vol. 49, no. 2, pp. 284-296.
- Mondey, 2008, *Human resource management*, 10<sup>th</sup> edition, Pearson International Edition, London.
- Nadeem, 2010, 'Role of training in determining the employee corporate behavior with respect to organizational productivity: developing and proposing a conceptual model', *International Journal of Business and Management*, vol. 5, 41, no. 12, pp. 206-211.
- Palembang Pos, 2013, *UKM belum dapat bersaing*, 28 Agustus, viewed 23 January 2014, <<http://palembang-pos.com>>.
- Robbins & Judge, 2007, *Organizational behavior*, Prentice Hall PTR, USA.
- Samitowska, 2011, 'Barriers to the development of entrepreneurship demonstrated by micro, small and medium enterprises in Poland', *Economics & Sociology*, vol. 4, no. 2, pp. 42 - 49.
- Sekaran, 2006, *Metodologi penelitian untuk bisnis*, Salemba Empat, Jakarta.

- Supriyanto, 2006, 'Pemberdayaan usaha mikro, kecil, dan menengah (UMKM) sebagai salah satu upaya penanggulangan kemiskinan', *Jurnal Ekonomi & Pendidikan*, volume 3, 43, no. 1, pp. 1-16.
- Toker, 2011, 'Job satisfaction of academic staff: an empirical study on Turkey', *Emerald Group Publishing Limited*, vol. 19, no. 2, pp. 156-169.