Impact of Human Resources' Knowledge and Skills on SMEs' in Medan City, Indonesia

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The purpose of this research article was to explore the influence of knowledge and skills of human resource on the performance of culinary Small and Medium Enterprises (SMEs) in Medan City, Indonesia. Using quantitative research design, data were collected from 120 culinary SMEs located in Medan City. Multiple regression, *t*-test and *f*-ratio were used to estimate the significant effect of human knowledge and skills partially or not, whereas F test was applied to test whether the effect will be simultaneous. Results showed that knowledge and skills of human resources have significant and simultaneous effect on the performance of SMEs. It was also found that the knowledge and skills of human resources have a partial significant influence on the performance of SMEs. Human Resource skills factor has greater impact on the performance of SMEs as compared to human resource knowledge factor.

Keywords: Knowledge, skills, performance, culinary SMEs, Medan city

JEL: J24, P13

Small and Medium Enterprise (SMEs) is a business group that can survive even when the economic turbulence hit the country. In many countries the number of small and medium business units continues to increase and provide a stable job employment opportunities. However, it is somehow still perceived as a weak and secondary operating industry. Currently Small and Medium Enterprises (SMEs) have a pivotal role in economic development of Indonesia. They also have a considerable position in the national economic development and have deemed particularly from its contribution to Gross Domestic Product (GDP) of Indonesia as it continues to increase every year.

Small and Medium Enterprises can expand their business operations and contribute economic services to society. They can play an important role in the process of equalization and improvement of people's income as well as promoting economic growth. This leads to maintain their role in bringing national stability in general and economic stability in particular. Availability of raw materials for the local small and medium industries is a distinct advantage that allows them to operate efficiently. The requirement of small working capital gives the opportunity to people having an entrepreneurial motivation to establish business units with high level of technical sophistication and affordable production. Within certain limits of the activities of small and medium industries, the possibility of reducing imported food and beverage in Medan city of Indonesia decreases the foreign exchange needed in market.

In harmony with economic development programs of Indonesian government, where the starting point is directed at improving the welfare and poverty alleviation through economic empowerment, it is predicted that Indonesia needs approximately additional 20 million units of new businesses outside the agricultural sector. It is expected that in the next 15 years, it can boost the carrying capacity of economic growth and job creation for the people of Indonesia. This means that country must develop 1.3 million new business units in every year (BPS, 2016). However, the infrastructure is relatively limited. Development of new enterprises linked to an effort of fostering conducive business environment, fostering public willingness to entrepreneurship and improving the ability of the community to entrepreneurship (Kadir, 2015; Syihabuddin and Saefudin, 2012; BPS, 2016).

In general, economic growth in the city of Medan is also affected by contribution of SMEs in country's economy. It can be seen from the number of SMEs (242,890) are providing manufacturing services, industrial crafts, and various other businesses. Based on data from the Central Bureau of Statistics, the proportion of the number of micro, small and medium enterprises has reached 99.8 percent of the total economic enterprises in the city of Medan. This means that the number of SMEs has reached almost 500 times the number of large businesses. However, the economic contribution of SMEs to the city of Medan is estimated only to reach 39.8 percent, while large enterprises have reached 60.20 percent (BPS of North Sumatra, 2014). This shows the strength of the vast business sector and the limited movement of the SMEs sector.

Medan population is relatively growing faster in the recent years, and it has the prospect of a promising culinary SMEs sector (BPS, 2014). It can be seen from the culinary vendors in various parts of the city of Medan that they are capable of absorbing manpower at 5–7 people. Many culinary service providers in Medan are very competitive. It is observed that number of SMEs business sector in the field of evening culinary can create new employment for residents of the city of Medan and surrounding areas. In the long run, this can increase people's income. Therefore, SMEs should be developed to undertake the development of the human resources in various aspects.

Improving the quality of human resources is highly needed, especially in the field of human resource competencies such as knowledge, skill, ability and attitude to entrepreneurship. Human resources development is fruitful not only for SMEs business owner but also for improving the livelihood of workers (Purwidianti, 2015). Entrepreneurship and productivity must be supported with the development of technology in order to strengthen the quality of human resource. On the other hand, the use of technology is increasingly important since 60 percent of the production process (BPS, 2016) is still carried out in labour–intensive SMEs. Somehow this indicates the limited mastery of science and technology and marketing skills by SMEs human resources.

Based on the analysis above, the human resource competency development of SMEs must be considered to produce a workforce that can compete in the global market. Besides, the improvement of human resources is indispensable considering the development of SMEs cannot be separated from the role of cooperative association or Koperasi in Indonesian language (Laban and Sirine, 2014) which is always providing capital, providing technical services and facilitating business networking in addition to raw material procurement and marketing for SMEs products. Based on the above background, it is necessary to conduct research on the influence of knowledge, skills and human resource capability to explore the performance of culinary SMEs in Medan city of Indonesia.

LITERATURE REVIEW

Theories that were adopted in this study include Blanchard and Thacker's (2004) knowledge, human performance theory of Soetjipto *et al.*, (2002) knowledge of consumers, promotion and marketing strategies (Ardiana *et al.* 2010), and character and personality (Robbins and Judge, 2009).

− Knowledge

Knowledge is the information owned by a person about a particular field. Scores or knowledge tests often fail to predict human performance. Tests do not succeed because they measure knowledge and expertise as to what should be done in a job. Knowledge tests measure the ability of test takers to choose a correct answer but could not see whether someone can do the job based on the knowledge he has (Soetjipto *et al*., 2002). According to Blanchard and Thacker (2004) knowledge is categorized as follows: (1) Information obtained and placed in our memory (declarative). (2) How is the information collected and used to thing we already know (procedural). (3) Understand how, when and why the information is useful and can be used (strategic).

Knowledge reflects the cognitive ability of an employee in order to recognize, understand, realize and comprehend a task/job. Therefore, employee knowledge can be developed through education, formal and non−formal as well as experience. Education equips a person with basic knowledge, theory, logic, general knowledge, analytical skills and the development of character and personality (Robbins and Judge, 2009). The knowledge that owners of culinary industry have in operating their business in the city of Medan is the core of this study. Their experiences were also considered in the observation. Indicators of knowledge are business management knowledge, knowledge of products or services, the knowledge of consumers, promotion, and marketing strategies (Ardiana *et al.*, 2010).

Based on this view, the knowledge of employees on assignment/job can be measured by indicators such as the following: a) Understanding of the assignment/job coverage; b) Knowledge of the procedures for implementing the tasks/work; c) An understanding of how the implementation of the tasks/work ; d) Comprehension of the responsibilities of the task/job; e) An understanding of the challenges in the implementation of tasks/work; f) Conformity of variation knowledge with knowledge in the

implementation of tasks. (Blanchard and Thacker, 2004; Soetjipto et al., 2002).

– Skills

The skills of the owners/managers are has significant effect on the SMEs in Medan city of Indonesia. Indicators of skills include production skills, communication, teamwork and organization, supervision, finance, administration and accounting (Ardiana et al., 2010). Skills are regarded as capacity required in executing a series of tasks developed as the result of training and experience. An individual's expertise is reflected by how well a person in carrying out a specific activity, such as operating an equipment, communicating effectively or implementing a business strategy (Blanchard and Thacker, 2004). Therefore, skill is the ability to perform a particular task both physically and mentally (Soetjipto, 2002).

Based on the above understanding, it can be concluded that the skills are defined as an ability to operate a job easily and meticulously which requires basic job understanding. The skills of employees in this context can be measured by several indicators such as the following: a) determining how to complete the task/job, b) determining the best procedure in carrying out the task/job; c) executing a well-done job; d) determining the size/volume of the best tasks that can be completed; e) determining the best measure of the quality of work that can be completed; f) predicting the results of the implementation of tasks/work (Alhempi and Harianto, 2013)

– Performance

Performance is an indicator that can be enhanced by a person or group of people in the organization and is a mean of deciding in a process to achieve organizational goals. Organizational performance should be measured based on the specific output size and time period to deliver. Performance indicators include profitability, financial condition, results of products, the number of the customer, the number of sales, employee satisfaction, and compensation and motivation of employees (Ardiana et al., 2010).

It is evident that different organizations have different performance measurement form. For organization of which output can be identified individually in the form of quantity such as a cigarette factory where workers' performance indicator can be easily measured, i.e., the size of the output is achieved within a certain time. However, in the system of work group or team, performance is somewhat difficult to be measured individually. In sucg organizations, among other indicators, performance can be seen through the following indicators: adherence to all the rules that have been established within the company, and ability to carry out their duties without errors (with the lowest error rate) (Simamora, 2011).

The performance also depends on job satisfaction and rate of return and is influenced by the skills, abilities and individual traits of work force. Therefore, according to the lawyer-partner model, the individual performance is basically influenced by factors following: a) expectations regarding rewards; b) encouragement; c) the ability, needs and nature; d) perceptions of the

task; e) internal and external rewards; f) the perception of the level of remuneration and job satisfaction. Thus, the performance is essentially determined by three things: 1) the ability, 2) desire and 3) the environment. Therefore, in order to have good performance, one must have high desire to work and to know his job requirements. Without knowing these three factors, good performance will not be achieved. In other words, the individual performance can be improved if there is a match between the job and ability. The performance of individuals is affected by job satisfaction. Job satisfaction itself is individual feelings toward his work. These feelings are in the form of an assessment of how much work to be done as a whole is able to satisfy their needs (Ardiana *et al.*, 2010).

− Small and Medium Enterprises (SMEs)

Small Business is a trading company with a workforce quantity between 5−19 people. According to the International Labour Organization (ILO), small and medium enterprises are businesses that employ up to 10 people and use simple technology, minimal assets and low managerial ability and enjoy various tax exemptions. Haeruman (2000: 12) states that the challenges for the business world, especially the development of SMEs, are covering broad aspects, such as: a) Increasing the quality of human resource in terms of management skills, organization, and technology, including business scale, b) Competence of entrepreneurship, c) broader access to capital, and d) transparent market information,

− Small Business Performance

Ardiana *et al.* (2010) argued that the company's performance is the result of many individual decisions which are made constantly by management. The performance of SMEs is affected by HR competence as well as influenced by the quality of working life. The quality of working life was a terminology firstly introduced at the International Labor Conference in 1972 but recently received vast attention after the United Auto Workers and General Motors took the initiative to adopt practices to change the quality of working life working system (Husnawati, 2006). According to (Suharto, 2010) there are several causes weakening the quality of working life in Small and Medium Enterprises (SMEs), namely: a) the management's inability, b) lack of experience, c) lack of financial control, d) Failure to develop strategic plan, e) less organizational control, f) a horrific location, and g) Lack of creativity and innovation.

This study attempts to see and examine the obstructions associated to the performance of small and medium enterprises (SMEs), which are linked to the management and quality of human resource of SMEs.

METHODOLOGY

This study used mixed research design (Neuman, 2007) and tested the important factors of human resource i.e. knowledge and skills of the culinary management of SMEs (Small and Medium Enterprises) influencing the performance of SMEs in the Medan city. The independent variables used in this study include the knowledge (X1) and skills (X2), whereas the dependent variable was SMEs performance (Y).

Knowledge (X1) is the mastery of science and technology that someone has and obtained through the learning process and life experiences. Indicators of knowledge, in this case, are business management knowledge, knowledge of products or services, knowledge of consumers, knowledge of promotion and marketing strategies. Skills (X2) are the special capacity to manipulate a physical object. Indicators of skills include production skills, communication, teamwork and organization, supervision, finance, administration, and accounting.

Performance (Y) is the result of work that can be achieved by a person or group of people in the organization and a means of deciding in a process to achieve organizational goals. Organizational performance should be measured based on the specific size and in the unity of time. Performance indicators include profitability, financial conditions, results of competitive products, the number of customers, the number of sales, and employee satisfaction on the compensation and employees' motivation. The study population includes human resource departments of SMEs engaged in the culinary industry in the city of Medan. The sample was collected in 2015 by the non-random purposive sampling technique and SMEs were selected in accordance with the following criteria:

a. SMEs (Small and Medium Enterprises) that are engaged in the culinary sector.

b. Small businesses that have the workforce with a minimum of 5 or maximum turnover of RP 20,000,000.

c. Respondents (sample) are the owner of the culinary SMEs.

d. From the number of culinary SMEs selected, with corresponding points 1 and 2, they will be sampled only by 10 percent and is determined proportionally.

From the observations, there were 1200 business units, so, the total number of samples in this study was 10 % x 1200 = 120 business units. Thus the sample was set to 120 respondents.

The type of data in this research was the primary data collected from SMEs and secondary data such as the data profiles centre number of SMEs. While the data source were respondents (HR of SMEs) consisting of owners of SMEs and culinary management of SME Centre in Medan. The data were collected by using interviews and a questionnaire. The data analysis used was inferential statistical analysis, namely, multiple linear regression analysis in order to determine the effect of multiple independent variables (X) on the dependent variable (Y), simultaneously. Thus, to prove and test whether there is a significant full, partial or no effect, I used the t–test, whereas to test whether the effect is simultaneous I used the f–test (Ghozali, 2006) .

RESULTS

Multiple linear regressions was applied to explain the influence of HR knowledge and skills on the performance of SMEs. The regression analysis was performed by using SPSS software. The multiple linear regression equation has the following formulation:

$$Y = b_0 + b_1X_1 + b_2X_2 + \varepsilon$$

Thus obtained the equation:

$$Y = 6.91 + 0.17\ X_1 + 0.65\ X_2$$

With an estimated standard deviation of 3.83. Descriptions of the multiple linear regression equations above is as follows (see Table 2):

Constant number ($b0$) of 6.91 indicates the magnitude of the performance of SMEs if the knowledge and skills of human resources are equal to 0.

The first regression coefficient ($b1$) of .17 indicates the magnitude of the effect of human knowledge on the performance of SMEs by assuming constant HR skills. This means that if the knowledge factor increase by 1 unit, then the predicted performance of SMEs will be increased by .17 unit value assuming constant skills.

and rejection of the hypothesis are as follows:

a. hypothesis: H_0: There is no effect of the knowledge and skills of human resources significant to the performance of SMEs.

H_1: There is the influence of knowledge and skills of human resources significant to the performance of SMEs.

b. Alpha (α) = 0.05; k (the number of variables analyzed = 3); N = 120, then based on the f–ratio values obtained at 5 percent (2: 117) by 3.05.

c. Criteria for acceptance and rejection of the hypothesis

If $f_{count} > f_{table}$, then H_1 is accepted, whereas if $f_{count} < f_{table}$ then H_1 (hypothesis) is rejected.

	Model	Sum of Squares	df	Mean Square	f	Sig.
1.	Regression	1951.05	2	925.52	62.88	001.[a]
	Residual	1721.86	117	14.71		
	Total	3572.92	119			

[a] Predictors: Skills, Knowledge

[b] Dependent Variable: Performance

Table 1: F Test (ANOVA)[b]

The second regression coefficient ($b2$) of .65 indicates the magnitude of the effect of SMEs skills of human resources on performance with the assumption of constant human knowledge. This means that if the human resources skill factor increase by 1 unit, then the predicted performance of SMEs will be increased by .65 unit value assuming a constant HR knowledge.

Procedures, criteria and tests for acceptance

d. Based on the test f calculated is 62.88, $f_{count} > f_{table}$ (3.05), so H_1 is accepted (see Table 1). This shows that the knowledge and skills of human resources simultaneously and significantly affect the performance of SMEs.

− t-test

To determine the partial effect of each variable of human resources' knowledge and skills on the performance of SMEs in the field of culinary, I

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1.	(Constant)	6.91	1.46		4.71	.001
	Knowledge	.17	.07	.16	2.22	.028
	Skills	.65	.07	.61	8.22	.001

[a] Dependent Variable: Performance

Table 2: Regression and t-test for Effect of Knowledge and Skills of HR on the Performance of SMEs [a]

conducted t–test as shown in Table 2.

Procedures, criteria for acceptance and rejection and results are shown below:

a. hypothesis: H_0: $b_1 = 0$ means that knowledge of human resources has no effect on the performance of SMEs.

H_1: $b_1 \neq 0$ means that knowledge of HR has a positive effect on the performance of SMEs.

b. Hypothesis testing: When $t_{count} > t_{table}$ (α, $N–k–1$), then H_0 is rejected which means knowledge of HR has a significant influence on the performance of SMEs and if $t_{count} < t_{table}$, then H_0 is accepted, meaning that human knowledge has no significant influence on the performance of SMEs.

c. Based on the results of processing with SPSS program, it is found that t_{count} is 2.22.

d. With α= 5%, = 5 %, t_{table} (5 %; 120) it was obtained t_{table} value of 1.65. From the description, it can be seen that t_{count} (2.22) > t_{table} (1.65), it can be concluded that H_1 is accepted, meaning that knowledge of human resources significantly affects the performance of SMEs.

Hypothesis testing for the influence of human resources skills on the performance of SMEs (X2). Procedures and criteria for acceptance and rejection of the hypothesis set as follows:

a. hypothesis H_0: $b_1 = 0$ means that human resources skill has no effect on the performance of SMEs. H_1 : $b_1 \neq 0$ means that the skills of human resources have positive influence on the performance of SMEs.

b. Hypothesis testing When $t_{count} > t_{table}$ (α, $N–k–1$), then H_0 is rejected which means that HR skills has a significant influence on the performance of SMEs. if $t_{count} < t_{tabel}$ then H_0 is accepted which

means that the skills of human resources have no significant influence on the performance of SMEs.

c. Based on the results of processing with SPSS program, the calculate t_{count} is 8.22.

d. With α= 5%, t_{tabel} (5%; 120), t–table value of 1.65 was obtained. From the description, it can be seen that t_{count} (8.22) > t_{table} (1.65), thus, H_1 is accepted which means that the skill of human resources significantly affect the performance of SMEs.

Based on the above results, it can be seen that the knowledge and skills of human resources has a significant influence on the performance of SMEs, where the human resources skill factor has more dominant influence on the performance of SMEs if it is compared with the knowledge of SMEs.

DISCUSSION

The results show that independent variables X (knowledge and skills of human resources) have a positive and significant effect on the performance of SMEs. This means that the higher the knowledge and skills of human resources, the better the performance of SMEs or vice versa. Therefore, knowledge and skills need to be upgraded and maintained to encourage employees to achieve better performance, which in turn will contribute to increase in performance of SMEs.

The positive and significant influence of variables of knowledge are in line with the theory that knowledge plays an important role in preparing qualified and competitive human. It is due to the fact that knowledge becomes the centre of all changes and must be addressed

appropriately. The skill of supporting human resources is one of the factors in improving the performance of SMEs. By the availability of high skilled human resources to manage the SMEs, it is expected that better performance in these enterprises will be attained.

The results showed that the skills of human resources have a more dominant influence on the performance of SMEs in comparison with the knowledge of HR. This is due to more skills are commonly influenced by the hands-on experience in managing a business, while knowledge can be obtained from the resources without even being involved and/or running SMEs actively.

The findings show that human resource of SMEs experience the modern marketing system. In the past, the culinary SMEs depended on the motivation and gastronomy interest, but now the SMEs have more complicated challenges in managing the diverse menus, costumer's perception, and marketing. The theories of knowledge (Kadir 2015; Syihabuddin and Saefudin, 2012) need the wider implication in the SMEs sustainability; the continual HR training is very important now. The rise of culinary SMEs in Medan city should be followed by the management theories on culinary service.

CONCLUSIONS AND SUGGESTIONS

1. It is simultaneously showed that the knowledge and skills of human resources has a significant effect on the performance of SMEs.

2. It is showed that partially the knowledge and skills of human resource have a significant

influence on the performance of SMEs. HR skill factor has a more dominant influence on the performance of SMEs in comparison to the knowledge of HR.

1. In order to develop the SMEs, it is pivotal to pay attention to human resource by improving knowledge and skills of SMEs owners.

2. Many government programs are intended to improve SMEs in Indonesia but have not been thorough in execution. They should be very concerned regarding capabilities and skills of SMEs in order to have better performance.

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