Stimulating SMEs Performance based on Marketing Mix Approach: A Study of Featured SMEs in Medan

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Abstract: Micro, small and medium enterprises not only have an important role in employment and increase economic growth, but also contributed to the gross domestic product which gave a great contribution to the economy of Indonesia. It also provide important role to adapt in Industry 4.0 as most of enterprises in Indonesia were based on SMEs. This study aimed to evaluate the role of marketing mix to stimulate the performance of SMEs thus promoting growth for the future along the SMEs' readiness toward industry 4.0. A number of 180 owner of featured SMEs in Medan participated in this study. The data were collected by self-administered questionnaires and analyzed using multiple regression analysis. The result showed that current SMEs is moving slowly to adapt in industry 4.0. In addition, marketing mix played important role to stimulate SMEs' performance. The most important aspect of marketing mix was product development to stimulate SMEs' performance.

1 INTRODUCTION

1.1 Research Background

Small and Medium Enterprises (SMEs) also called as Micro, Small, and Medium Enterprises always become the backbone of economic development in almost all countries (Anggadwita and Mustafid, 2014). Asian Productivity Organization (APO) recognize the important role of SMEs to maintain themselves as main core in economic development and productivity. They also believed that SMEs have the most contribution toward Gross Domestic Product and Employment within the countries (Asian Productivity Organization, 2015). In Indonesia, SMEs contributed for almost 60% of GDP and empoloyed 97% of labour forces (Badan Pusat Statistik, 2015). These condition kept the SMEs as important aspect to be monitored and be enhanced.

The fourth indutrial revolution, Industry 4.0, undergo transformation toward more digitalized and autonomos industrial process which will bring more effective and efficient working process. The rise of industry 4.0 is driven by Smart manufacturing technologies (autonomous robots, additive manufacturing, laser cutting), big data and cloud computing and Internet of Things (Alma-Lobo, 2016). Industry 4.0 provide new opportunities, such

as live updating data not only for production but also integrated into forward and backward. Cloud computing also available to support massive yet ease to use decision making tools. Despite of may new opportunities come forth the industry 4.0, many of SMEs have not ready to implement it yet (Schroder, 2017). The main problem was the poorly equipped and implementation toward the tools for industry 4.0. Nevertheless, it is still important to enhance SMEs' performance and keep up their readiness toward industry 4.0 for an even better growth in near future (Bettiol, 2017).

World Bank (2018) predicted that the world's ecomonic growth will remain stable for the next years as long as we have a strong economic foundation to support its growth. These foundation is related to SMEs role, especially in develping countries.

Indonesia and other ASEAN member has agreed to create a free trade area for ASEAN member since 2016. It creates opportunities and threats at the same time to enterprises. The free trade area will dismiss the effect of barrier to entry; the competition become even tighter and fiercer than before. Even though SMEs has a particular strength to survive, such as their product that almost always be preferred by the locals, many of customers become more digitalized that prefer the ease to order rather than directly shop in the market. In order to remain survive in the competition, SMEs need to improve their marketing

activities to improve their performance (Wang and Wong, 2004).

Previous studies provides several aspect that likely affect a firm's performance (Attaolah, 2011; Mukhamad and Kiminami, 2011; Rosli, 2014). One of the factors that have influence toward firm's performance is their marketing activities. Marketing activites main objectives is to create demand for the product, either by push it to the customer or pull the customer toward it. A succesful marketing activies will attract customer, building relationship with the customer, improving sales and reduce obsolete product (Kotler and Keller, 2012).

In the past years, many new SMEs emerged in the market yet many of them also disappeared from the market. They usually operated under a trend in the society. They emerged as the new trend booming and disappeared as the trend loosening. There is no actual marketing activities. They usually ride on the trend to attract their customer. As the result, they can easily shutdown their business as the trend loosening. Muninzu (2010) studied these phenomenon and found out that they lack of the required skill to operate the business for the long term. They never adapt and enhance the product to stimulate demand which lead to earlier shutdown.

Even though we believed that marketing has one role to stimulate SMEs' performance, Lu and Beamish (2001) reported that there is no effect of promotion (marketing) to SMEs' performance. This study aimed to evaluate the marketing mix influence to SMEs' performance while evaluating the SMEs' readiness to industry 4.0. Thus, our study focussed on:

a. Evaluating the SMEs' adaptation toward industry 4.0 especially in marketing aspect
b. Evaluating the impact of marketing mix toward SMEs' performance

1.2 SMEs in Medan

The condition of SMEs in Medan actually hard to observe as there is no central registry exist for the SMEs. However, the government stated that there are six sector that become their focus on developing the SMEs; namely Rattan, Batik, Leather, Culinary, Souvenir, and Embroidery. Our study will be focussed on these sectors in Medan as they were the featured SMEs in the area.

World Bank since 1984 defined SMEs based on their number of employee. Firm that has a number of employees less than 50 workers can be considered as small enterprises; 50-199 workers can be considered as medium enterprises; 200 or more workers considered as large enterprises (Jamil and Muhamed, 2011). SMEs in Medan can be classified under UU No 8/2008 which regulate the SMEs. The

classification is based on total assets and annual revenue. Since most of the SMEs acually do not record their assets, we used annual revenue as the base of our SMEs' classification. Firm that generated less than IDR 300 Million yearly considered as Micro Enterprises; 300 Million to 2 and half Billion considered as Small Enterprises; 2 and half Billon to 50 Billion considered as Medium Enterprises.

2 LITERATURE REVIEW

2.1 SMEs Performance Measurement

Performance can be viewed as a legal achievement toward a certain organizational goals (Sedarmayanti, 2007). Measuring a firm's perfromance can be based on Kaplan's balance scorecard which measured every aspect of its business activities (Peterson, 2006). Performance of a firm usually measured by quantitative apporach using financial outcome such as ROE, production level, customer level, and efficiency level (Taticchi, 2008). There is a study for measurement tools to evaluate SMEs that conclude that they should be evaluated by using aspect of quality, timely, financially, customer satisfaction, and human resoruces (Hudson, 2001). However, the implementation of pure quantitative approach can hardly applied to many SMEs as they have significant problem such as there is no record for their activities (Manville, 2006). Most of SMEs can only vaguely explain their condition preluding the semi-quantitative approach using perspective measurement.

2.2 Marketing Aspect

We used 4P marketing mix to evaluate the marketing aspect for SMEs' as most of SMEs. According to Marketing Gurus, we may use 7P in service marketing. However we focused on 4P as we studied about common SMEs that can be operated in form of goods and services (Kotler and Keller, 2012).

2.2.1 Product

This aspect refer to product development process that will be sold in the market. This aspect is the most important aspect in marketing mix that can affect most of marketing strategies. Product development become a necessities to keep the market demand of firm's product in check. Product innovation played an important role to affect demand thus improving sales.

2.2.2 Price

On one side, refer to a sacrifice that must be paid to gain a benefit of product or services. It can also be explained as an exchange value. However, price in marketing concept is not limited to an exchange value. Price aspect in our study reflect the pricing strategy under marketing mix. SMEs should be able to improve their sales value as they apply the effective pricing strategy that affordable to the market (Peres-carbanero, 2011).

2.2.3 Promotion

This aspect refer to the activities to affect customer to participate in transaction. In short, it is to stimulate demand either by pull the customer or push the product toward customer. Promotion mainly communicated the information about the product to potential buyer.

2.2.4 Place

Also refered to distribution channel or marketing channel. The purpose of this aspect is to ensure that product or services delivered to the customer. Place marketing mix support business transaction between produser to customer. An effective distribution channel can help improving customer satisfaction while ensuring product availability in market.

3 RESEARCH METHOD

3.1 Research Time

The study was conducted in Medan from March to June 2018.

3.2 Participant

As there is no central registry toward SMEs in Medan, we employed the random sampling technique and use the stratified-convenience sample. We collect 30 sample for each featured sector SMEs in Medan. A total of 180 SMEs participated in this study, thus the final sample size was 180 SMEs from all around Medan. As there is no registry, we preeliminated the participant based on SMEs' regulation. The annual revenue of SMEs is under IDR 50 Billon. It is not based on the number of employees, but the annual revenue of SMEs. The subject for this study was the SMEs' owner as they run the business.

3.3 Data Collection Procedures

We used a self-administered questionnaires to collect the data. The questionnaires was based on the literature review related to each variables in this study. The questionnaires included items that measured SMEs' four dimension marketing activites, such as price, product, promotion and place, along with their performance. Each items were measured using five-point Likert scales. The questionnaires were also collected the SMEs' readiness to adopt digitalization and Internet of Things (IoT) aspect of Industry 4.0. while collecting their characteristics such as edutional attainment, sex, and opinion toward industry 4.0. The distrubuted questionnaires were identical and were merged into a single dataset for our study purpose.

3.4 Validity and Reliability of Questionnaire

As we used self-administered questionnaires, we conducted the validity and reliability test before collecting the data for our study. We collect 30 random SMEs around Universitas Sumatera Utara to confirm our questionnaires. The result showed in Table 1.

Table 1. Cronbach's Alpha Research Questionnaire.

Variables	Number of Statements	Cronbach's Alpha	Conclusion
SMEs Performance	8	0.821	Reliable
Product Mix	6	0.833	Reliable
Price Mix	6	0.914	Reliable
Promotion Mix	6	0.876	Reliable
Place / Distribution Mix	6	0.890	Reliable

The validity was evaluated by using quantitative method. We employ Pearson's correlation from each item statement to the total of each variable (item to total correlation). The critical point (r-table) used for 30 samples was 0.361. All of the statements met the criteria of the validity of the research questionnaire. Table 1 showed the result of the reliability test by evaluating its internal consistency using Cronbach's alpha. Each variable had been consistently measured with an alpha value > 0.7. Therefore all the questions posed on the validity and reliability test were valid and reliable. Our questionnaires should be fine to be deployed into data collecting proccess.

3.5 Data Processing and Analysis Method

Data were analyzed using a multiple linear regression method to predict the SMEs' performance based on their marketing apporach as we focused on a simple model to explain the relationship between marketing mix and SMEs' performance. The research model used in this study follow our Figure 1. Hypothesis testing was performed using 5% significance level following the standard practice. The analysis also included the descriptive statistics. We used SPSS for the data analysis. F-test was used to evaluate the simultaneous impact and t-test were used to evaluete the partialy impact toward SMEs performance.
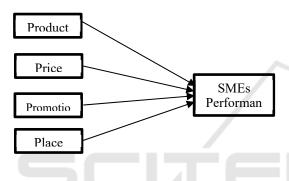

Figure 1. Research Model.

3.6 Hypothesis

The hypothesis for this research was contructed based on our research model. The model proposed linear relationship between marketing mix toward SMEs' performance. Our hypotheses include the following statement:

Hypothesis 1 : SMEs' Product mix practice positively and significantly affect their performance

Hypothesis 2 : SMEs' Pricing mix practice positively and significantly affect their performance

Hypothesis 3 : SMEs' Promotion mix practice positively and significantly affect their performance

Hypothesis 4 : SMEs' Distribution mix practice positively and significantly affect their performance

4 FINDINGS

4.1 SMEs' Owner Characteristics

We distributed the questionnaires to owners of SMEs in Medan. As they were not officially registered, it is hard to invite the SMEs to participate in our study. Yet, we were able to collect 180 sample for our study. We evaluated the characterstics based in their classification, sex, educational attainment, and their readiness to digitalized firm along with their opinion toward industry 4.0. We employ descriptive statistics to evaluate the current situation of our SMEs' characterstics. We tabulized the data and analyze the characteristics of our SMEs. Table 2 summarized our findings.

Table 2. SMEs Characteristics.

Charactersitics	N	Percentage
SMEs Classification	**180**	
Micro Business	142	78,89%
Small Business	20	11,11%
Medium Business	18	10,00%
Sex	**180**	
Male	134	74,44%
Female	46	25,56%
Educational Attainment	**180**	
Elementary School	14	7,78%
Junior High School	24	13,33%
High School	107	59,44%
Undergraduate	30	16,67%
Post-Graduate	5	2,78%
Digitalization	**180**	
Not Yet	126	70,00%
Work on It	33	18,33%
Digitalized	21	11,67%
Knowledge about Industry 4.0	**180**	
None	172	95,56%
Familiar	8	4,44%

Most part of Table 2 were self-explanatory. Medan's SMEs mostly came from Micro Enterprises that have annual sales less than IDR 3 Million. The owner were usually male as most of time in Indonesia, male referred as family head that have responsibilities to their family's livelihood while female ofter responsible in domestic works. The owner mostly from high school. Actually based on our study, the SMEs in Medan is not yet ready for industry 4.0. Even though some of them started using thrid party online services such as GO-JEK or several

online shop, most of them have no capabilities to maintain it. They also do not know about the issue of industry 4.0.

4.2 The Current Practice of SMEs

Average score of each variable was used to evaluate the current practice of SMEs performance and marketing aspect in common. We used five point Likert scale to measure each indicator which the minimum possible value was 1.00 indicating a very poor performance / marketing practices and maximum value was 5.00 indicating a very good performance / marketing practices.

Table 3. Descriptive Statistics of SMEs in Medan.

Aspect	N	Min	Max	Mean
SMEs Performance	180	3.00	5.00	4.07
Product	180	2.67	5.00	4.09
Price	180	2.67	5.00	4.07
Promotion	180	2.00	5.00	2.99
Place	180	2.67	5.00	4.15

Table 3 indicated that SMEs in Medan perceived that they have a good performance (Mean=4.07). Their marketing approach also can be considered good except the promotion practices with mean value of 2.99 that reflect a slightly good performance. However, the maximun value of 5.00 indicated that several of our SMEs actually did a very good promotion practices.

4.3 Regression Analysis

We employ regression analysis to evaluate the relationship of each marketing practices on SMEs performance. We evaluated the R and adjusted R-squared value to determine the strength in relationship between our predictor and depenent variable. Regression model summary summarized the coefficient of determination as showed in Table 4. Coefficient of correlation (R) explained the strenght while adjusted R-Squared explained the variance which was explained under the given model (Ghozali, 2011).

Table 4. Model Summary.

Model	R	R Square	Adjusted R Square	Std. Error	Durbin-Watson
1[b]	.757[a]	.574	.564	.23046	1.861

a. Predictors: (Constant), Price, Promotion, Place, Product

b. Dependent Variable: SME_Performance

Table 4 showed that our model has a strong correlation between marketing practices and SMEs performance (R=0.757). SMEs' marketing practices can explain for 56.4% variances on SMEs' performance in Medan. The coefficient of regression and its significance level showed in Table 5.

Table 5. Coefficient of Regression.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.738	.222		3.329	.001		
	Product	.428	.067	.453	6.410	.000	.488	2.050
	Promotion	.128	.053	.138	2.425	.016	.758	1.320
	Place	.186	.059	.210	3.123	.002	.541	1.850
	Price	.104	.044	.131	2.340	.020	.777	1.286

a. Dependent Variable: SME_Performance

Sig F-test < 0.001

Table 5 indicated that each of our marketing practices in SMEs significantly affect the SMEs' performance. The strongest unstandardized regression coefficient was the product aspect on SMEs' performance. This result indicated that the most important aspect in marketing practices is to develop the product to satisfy SMEs' customer preferences. Our result indicated that a stronger marketing practices will lead to a better SMEs' performance. Our findings satisfy the condition to accept hypothesis 1 through 4. Statistically, there is enough evidence to state that product, promotion, place, and price which under marketing mix practices affect SMEs' performance.

5 DISCUSSION

The result of our study support that marketing mix activities in SMEs' business will positively affect their performance, such as increasing their annual sales and customer retention (Ardjouman and Asma, 2015; Izvercian, 2016; O'Dwyer, 2006). Moreover the result suggest that product, under marketing mix, has the most significant effect on SMEs' performance. Product design that reflect market trend, customer preferences, while periodically evaluating the change in market and customer become the key to improve SMEs' performance. Our finding support the previous study which also stated that product posititevly affect firm's performance. The rest of our findings also supported the previous study (Njau and Karugu, 2014). As we discussed about positive effect of price on SMEs' performance, we do not talked about the level of price. SMEs shoud consider society's level of income and willingness to pay before set the right price. The price should be affordable, reflecting the quality, and should be acceptable to the customers. Distribution channel also

significantly affect SMEs' performance. SMEs should evaluate their marketing channel including their sales area. Most of SMEs did not evaluate their distribution as long as they can sell their product. SMEs mostly consider themselves that their product is actually for locals, but some of their product might actually going overseas under a certain distribution channel. Learning their product destination can be one step closer to ensure that their product always available for the customers.

In addition with the digitalization toward industry 4.0 we would like to discuss furthermore about SMEs' promotion which currently has the least score in average practices in our study. Previous study indicated that SMEs have a significant barrier toward e-marketing practices which will be essential in the aspect of Internet of Thing (Industry 4.0) (Soto-Acosta, 2016). Previous study evaluate the adaptation of e-marketing on SMEs' performance which low but significant. Many of our SMEs still avoid e-marketing even though today's minimum requirement for e-marketing is relatively low by the effect of social media and even more afforable e-marketing and e-shopping tools in the future.

6 CONCLUSION

SMEs in Medan has not ready to adapt into Industry 4.0 yet. Digitalization and Internet of Thing (IoT) adaptation is still progressing yet strugling as they are not even mastering their own social media or online shop account. Thus, it is important to support SMEs with the required piece of resources needed such as knowlegde and skill transfer regarding industry 4.0 to the SMEs. Our study also conclude that pricing strategy is important for SMEs as well as the product development. They should set the price right based on product quality and buyers' purchasing power while pursuing demand.

Our study has examined the relationship between marketing mix and SMEs' performance in Medan. The result showed that each of marketing mix has a positive and significant effect toward SMEs' performance. That being said, improving overall marketing performance will lead to a better SMEs' performance. The current situation showed that SMEs' promotion practice still left a lot of room for improvement. E-Marketing also can be considered as one step to create a better promotion to generate a better performance.

The study does have a limitation, especially taking only one city as the sample which can affect the actual model and should be limited the interpretation to only one region. We suggested for an even greater research conducted to contribute and

create a better conclusion toward marketing effect on SMEs' performance.

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