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BAB III

RESEARCH METHOD

3.1 Research Paradigm

According to Sugiyono (2016: 42), "the research paradigm can be defined as a mindset that reflects the type and formulation of problems that must be answered through research, the theories used to formulate hypotheses, the types and number of hypotheses that will be used, and statistical analysis techniques that will be used.". The research paradigm used in this study is quantitative research or positivism. The paradigm that used in this study is the paradigm of positivism. Paradigm positivism is a paradigm that describes a phenomenon that happens in life is not limited and can simplify social phenomena (Irwan, 2018, p. 25). This study uses quantitative research using variables such as agile capability, operational capability, marketing capability, and SME performance. The selection of these variables is on the basis that the food and beverage SMEs studied use online food delivery services for online sales activities. So that with online food delivery services, SMEs Food and Beverages can improve their agile capability which will be followed by positive operational capability and marketing capability and can encourage SMEs performance in SMEs food and beverages.

3.2 Research Design

A research design is a framework that contains the procedures required to create or solve marketing research problems. A research design is the foundation for conducting research, and a good research design is one that ensures the

marketing research project runs smoothly and efficiently. Depending on the purpose of the research, research designs can be classified into several types. The method used will be determined by the research's purpose or problem. Kultar Singh (2007) classifies quantitative research into two groups, namely exploratory research, and conclusive research. Explorative research is research that seeks to describe or describe phenomena where the researcher does not yet have a direction or map of explanations about the phenomena he or she is dealing with.

Exploratory research is a type of research that is used when the research subject cannot be measured quantitatively. (Malhotra & Birks, 2020:69). Conclusive research is used when the objective of the study is to test hypotheses and test the relationship between these hypotheses. In conclusive research, data analysis is carried out quantitatively, and the research process is formal and structured (Malhotra & Birks, 2020). Descriptive research and causal research are two types of conclusive research. The goal of descriptive research is to describe something, such as market characteristics or functions. The goal of causal research is to find evidence of a causal relationship. (Malhotra & Birks, 2020).

Cross-sectional and longitudinal designs are two types of descriptive research. In a cross-sectional design, data is collected from a population sample only once. Longitudinal design data collection, on the other hand, is repeated. (Malhotra & Birks, 2020).

Cross-sectional designs can be further subdivided into single and multiple cross-sectional designs. Only one sample of respondents is drawn from a target population in single cross-sectional designs, and information is drawn from that sample only once. Whereas in multiple cross-sectional designs, two or more samples of respondents from a population are taken, but information is only collected from each sample once. (Malhotra & Birks, 2020).

Of all the approaches described, the authors adopt a conclusive approach with a descriptive type of research. This study collects data using a single cross-sectional design technique with a survey method that will be distributed online.

3.3 Object of Research

In the research that will be carried out, the authors choose the object of research, namely SMEs that use online order platforms as sales support, then for research subjects, namely SMEs business owners who are engaged in the food and beverages industry. This research was conducted by distributing online questionnaires.

3.4 Population and Sample

3.4.1 Population

The term population can refer to the total population. The term population is frequently used in research methods to refer to cognate words or groups that are the subject of research. The research population includes all research objects such as humans, animals, plants, air, symptoms, values,

events, attitudes toward life, and so on. As a result, this object can serve as a source of research data. (Bungin, 2006: 99):

The type of population is divided into two, namely:

- a. a finite population, which means that the number of people is fixed
- b. Infinite population, which means that the number of individuals is unknown with certainty.

for the population used in this study is SME food and beverages throughout Indonesia

3.4.2 Sample

Sugiyono (2017:74-78) defines sampling as a sampling technique. According to Sugiyono, there are two kinds of sampling techniques, namely:

- a. Random sampling is a sampling technique in which all individuals in a population are given the same chance to be chosen as sample members, either individually or collectively.
- b. Non-Random Sampling is a sampling method in which not all sample members are given the opportunity to be chosen.

In this study, the samples are 100 SME fnb Business owner in Jabodetabek.

3.5 Variable Operation

In this study, there are 5 variables that will be studied and used as material for analysis, namely Agile Capability, Marketing capability, operational capability, and SME Performance.

3.5.1 Agile Capability

The operational definition of agile capability is the score of the respondents' answers which consists of 10 indicators. The scale used in the questions given to the respondents is the Likert scale. Indicators of agile capability are presented in Table 2

Table 2 Operational Agile Capability

No	Variable	Definitions	Dimensions	Measurement Code	Indicator	Reference
1	Agile Capability	Agility is the ability to stay current with market dynamics and adapt strategies, tactics, and operations to respond quickly to market changes in new business opportunities.	Proactive	AC1	Sensing/identifying changes	Cerruti, C. (2013). Agile supply partnerships: the paradox of high-involvement and short-term supply relationships in the Macerata-Fermo footwear district.
				AC2	Fast Response to changes	
2			Competency	AC3	Strategic vision	
3				AC4	Appropriate product introduction	
4				AC5	Cost efficiency	
5				AC6	Cooperation	
6				AC7	Operation effectiveness	
5				AC8	Organization flexibility	
6			Flexibility	AC9	Product flexibility	
7			Quickness	AC10	Fast Operation time	

3.5.2 Marketing Capability

The operational definition of marketing capability is the score of the respondents' answers which consists of 11 indicators. The scale used in the

questions given to the respondents is the Likert scale. Table 3 displays indicators of marketing capability.

Table 3 Operational Marketing Capability

No	Variable	Definitions	Dimensions	Measurement Code	Indicator	Reference
1	Marketing Capability	A pattern that is applied by a company in using resources and becoming routines from time to time.	Marketing Planning Skill	MC1	The company has set up clear marketing objective	Muis, I. (2020). Marketing Strategy and Capability as the Mediators in Relationship of Market Orientation and Export Performance: A Case Study of Rattan Processing SMEs. <i>Binus Business Review</i> , 11(1), 31-42. https://doi.org/10.21512/bbr.v11i1.5964
2				MC2	The company has good marketing planning skills	
3				MC3	The company formulates marketing strategy creatively	
4			Marketing Activities Implementation	MC4	The company has achieved the goals of its marketing activities	
6				MC6	The marketing activities have met customer need	
7			Product Development Capabilities	MC7	the company develops products by empowering research	
8				MC8	The company has been successful in new product launching that the company develops and launch new product quickly	
9			Price and Communication Capabilities	MC9	The company has had marketing communication skills and process	
10				MC10	Customers have received and updated price structures from the company.	

11				MC11	To respond quickly to changes, the company has used pricing expertise.	
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3.5.3 Operational Capability

The operational definition of operational capability is the score of the respondents' answers which consists of 9 indicators. The scale used in the questions given to the respondents is the Likert scale. Indicators of operational capability are presented in Table 4

Table 4 Operation of operational capability

No	Variable	Operational definition	Dimensions	Measurement Code	Indicator	Reference
1	Operational Capability	The ability to perform basic functional activities such as receiving orders, fulfilling orders, and monitoring orders during a specified time period..	Organizing	OC1	Matching Task	Inan, G. G., & Bititci, U. S. (2015). Understanding Organizational Capabilities and Dynamic Capabilities in the Context of Micro Enterprises: A Research Agenda. <i>Procedia - Social and Behavioral Sciences</i> , 210, 310–319. https://doi.org/10.1016/j.sbsp.2015.11.371
2				OC2	Appointing the proper personnel	
3				OC3	Effective resource integration	
4			Managing	OC4	Controlling a variety of unexpected problems	
5				OC5	Task administration and monitoring	
6				OC6	Service development procedure	
7			Technically	OC7	Modifying	
8				OC8	Evaluation new product	
9				OC9	Competitor's Product	

3.5.4 SME Performance

The operational definition of SME performance is the score of the respondents' answers which consists of 7 indicators. The scale used in the questions given to the respondents is the Likert scale. Indicators of SME performance are presented in Table 5

Table 5 Operation of SME performance

No	Variable	Operational definition	Dimensions	Measurement Code	Indicator	Reference
1	SME Performance	Output/result dari kegiatan bisnis baik financial maupun non finansial	Growth	SM1	Profit and expansion	Ardyan, E. (2016). Market sensing capability and SMEs performance: The mediating role of product Innovativeness Success. <i>DLSU Business and Economics Review</i> , 25(2), 79–97.
2				SM2	Revenue from net sales	
3				SM3	Increased sales	
4			Overall Profitability	SM4	ROI (return on investment)	
5				SM5	Finance and non-finance are both relative terms.	
6				SM6	cost control	
7				SM7	Area coverage	
8				SM8	Number of branches	
9				SM9	Number of employees	
10				SM10	Number of customers	
11				SM11	Awareness	
12				SM12	cash flow	

3.6 Data Collection Technique

In this study, the data collection method or technique used is a survey technique, where this technique collects data sourced from respondents' answers.

The method used in this survey technique is to use questionnaires or written questions that are distributed directly or indirectly (Radjab & Jam'an, 2017: 28). Researchers used google forms to create online questionnaires so that they could be distributed online and paper questionnaires to obtain data by visiting SMEs outlets fnb. The types of questions in the questionnaire made are closed questions, namely questions that are only answered by respondents on a limited basis. Furthermore, the researchers used a Likert scale with 5 measurement items to assess the respondents' responses. The measurement scale is in the form of numbers, with number 1 indicating strongly disagree, number 2 indicating disagree, number 3 indicating neutral, number 4 indicating agree, and number 5 indicating strongly agree.

3.7 Data Analysis Technique

3.7.1 Validity Test

The validity test seeks to determine the measuring instrument's capability to measure what is being measured. (Umar, 2003). Meanwhile, Hair et al. (2014:7) define validity as the degree to which a measurement accurately represents the situation under study. A valid indicator has a KMO value of 0.5 (Kaiser–Meyer–Olkin) (Malhotra & Birks, 2020:648). It can also see the MSA (Measure of Sampling Adequacy) value; an indicator is said to be valid if it has an MSA value of 0.5. (Hair et al., 2014:102). Furthermore, the criteria for an indicator are said to be valid if they form a factor with a value of 0.5. (Hair et al., 2014: 115).

3.7.2 Reliability Test

A questionnaire is said to be reliable if the respondent answers the questionnaire questions consistently or consistently from time to time, according to (Ghozali, 2016:47). A variable is reliable in the reliability test if it produces a Cronbach's alpha value greater than 0.6 in the descr program. (Malhotra & Birks, 2020). The pre-test is a test carried out to determine the feasibility of the indicators used in making survey questions (Hair et al., 2014: 606). In this study, validity and reliability tests were carried out by distributing online questionnaires to 30 respondents. The answers from these respondents were then processed using the SPSS program.

3.7.3 Descriptive Analysis

According to (Sugiyono, 2017:147) descriptive analysis is a statistic that is used to describe the data that has been collected without intending to make a conclusion by SPSS. According to Mahadianto and Setiawan (2013:15), "Product Statistics and Service Solution, abbreviated as SPSS, is a computer program for statistical data processing." The various analyses used in the research are as follows:

1. Mean

The average value is obtained by adding up all the respondents' answers, then the total value is divided by the number of samples from the study. The formula for calculating the average is as follows:

$$\bar{X} = \frac{\sum_{i=1}^n x_i}{n}$$

Note:

\bar{X} = Average Count

X_i = Sample Value - 1

n = Amount Sample

2. Percentage Analysis

Percentage analysis aims to determine the characteristics of the respondents such as age, gender, income, and others. The formula for percentage analysis is as follows:

$$P = \frac{\sum f_i}{n} \times 100\%$$

Note:

P : Percentage (Respondents' Characteristic)

f_i : Number of respondents based on a certain characteristic

n : The total of all respondents in a certain characteristic

3. Scale Range

The scale range is used to provide an interpretation of the respondents' answers. The formula for the scale range is as follows:

$$R_s = \frac{m - 1}{m}$$

Keterangan :

R_s : Scale Range

m : The number of categories used

In this study using a Likert scale with a score of 1 (strongly disagree) to 5 (strongly agree). Then the scale range in this study is as follows:

$$R_s = \frac{5 - 1}{5} = 0.8$$

The resulting scale range in this study is 1.00 – 1.80 (strongly disagree), 1.81 – 2.60 (disagree), 2.61 – 3.40 (neutral), 3.41 – 4.2 (agree) and 4.21 – 5.00 (strongly agree).

3.7.4 Overall Fit Rating

The overall fit assessment from the PLS-SEM can be divided into two stages, namely the overall fit outer model assessment and the overall fit inner model assessment. The implementation of the overall fit outer model analysis is carried out to determine whether the measuring instrument used is fit for measurement (Hussein, 2015). Some of the outer model tests used for reflective indicators are as follows:

1. Convergent Validity: The value of the loading factor must be > 0.7 , and the value of the average variance inflation factor (AVE) > 0.5 (Hussein, 2015) (Ghozali & Latan, 2015).

2. Discriminant Validity: This is the value of the cross-loading factor to see whether the construct has an adequate discriminant or not. A construct has an adequate discriminant if the value of the construct being targeted is greater than the other constructs (Hussein, 2015).
3. Composite Reliability: Values above > 0.7 indicate high reliability (Hussein, 2015).

Some of the outer model tests used for formative indicators are as follows:

1. Significance of weights: This value must be significant with the construct (Hussein, 2015).
2. Multicollinearity test: This test is carried out to determine the relationship between indicators, if the VIF value is 5-10 it can be interpreted that the indicator occurs multicollinearity (Hussein, 2015).

The overall fit inner model assessment is carried out to see whether the structural model used is accurate and robust. Some indicators for overall fit inner model assessment are as follows:

1. Coefficient of determination (R^2): The range of values from R^2 is 0 – 1, the higher the value of R^2 , the more accurate it is. According to Hair et al. (2011), the R^2 value of 0.75 can be categorized as substantial, 0.50 as moderate and 0.25 as weak.

3.7.5 Hypothesis Test

Structural Equation Modeling (SEM) is a multivariate analysis technique that examines the relationship between complex variables, both

recursive and non-recursive to get a comprehensive picture of the entire model being tested. SEM can test the structural model (the relationship between the independent and dependent constructs) and the measurement model (the relationship between the loading value of the indicator and the latent construct). So that researchers can test the measurement error, factor analysis and hypothesis testing (Ghozali,2008).

SEM can be divided into two types, namely Covariance Based SEM and Variant Based SEM or also called Partial Least Squares SEM (PLS-SEM). The type of Covariance Based SEM (CB-SEM) usually uses software such as AMOS, LISREL, EQS, M-plus and is used to test theory or confirm theory, with a sample size of between 200 – 800. On the other hand, the Partial Least Squares SEM (PLS) type -SEM) usually uses software such as, SMART-PLS, TETRAD, PLS-PM, GSCA and is used to develop theory or build theory. The sample size of PLS-SEM is smaller than that of CB-SEM, which is between 30-100 samples (Haryono, 2014). This study uses the PLS-SEM type because this research was conducted to develop a theory about the role of agile capability, marketing capability and operational capability on Small medium enterprise. This study uses SMART-PLS software to analyze the results of respondents.

According to Alfa (2017), there are three path analysis models in PLS-SEM: inner model, outer model, and weight relation. The outer model describes the relationship between the manifest and other latent variables, the inner model describes the relationship between the latent variables, and the weight relation describes the estimated value of the latent variables. The SMART PLS model is described in this study as follows.

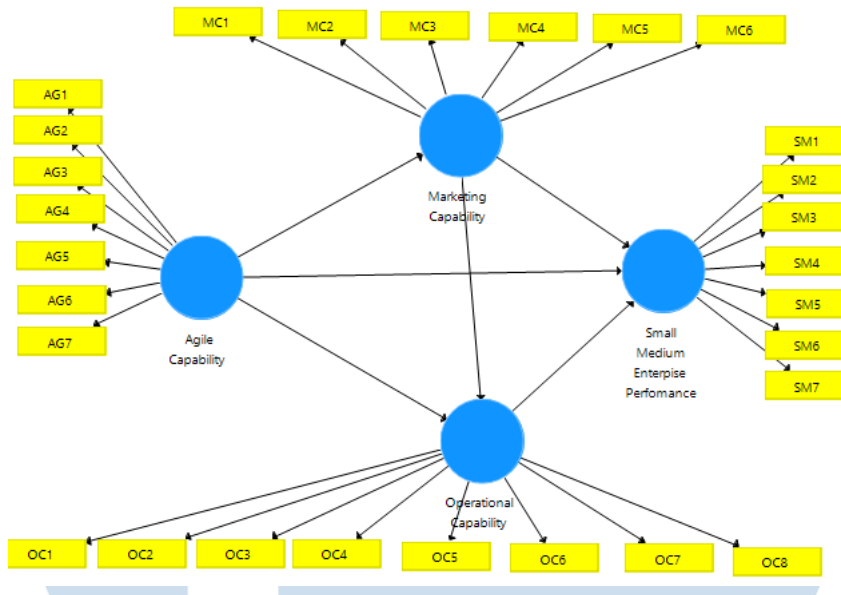


Figure 5 Model SMART PLS

Source: the result of the author

To be able to assess whether each hypothesis is accepted or not, a hypothesis test is carried out using bootstrap resampling. If the t-statistic result of the two-tailed hypothesis is > 1.96 and the p-value is < 0.05 , it can be said that the hypothesis is accepted (supported by data). However, if the t-statistic result of the hypothesis is < 1.96 and p-value > 0.05 , then the hypothesis is rejected (not supported by data) (Ghozali & Latan, 2014).