SMEs Perception in Adopting E-Commerce based on Importance Performance Analysis: Case Study on Corn SMEs in Banten Province Indonesia

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Abstract: The rapid growth of the internet has offered new marketing strategies. It's common for companies or individuals to do business transformation so that they can play optimally in the digital economy, by buying and selling through the internet called e-commerce. But in Indonesia, especially in the Lebak region, Banten Province, the ratio of SMEs that have used digital media is still very low. The purpose of this study is to examine the SMEs' perception in adopting e-commerce based on the Importance Performance Analysis (IPA). This study uses samples from Corn SMEs in Banten Province, Indonesia. This paper uses purposive sampling methods. The result of this study shows some indicators that need improvements based on quadrant analysis are the indicators in the quadrant A (Top Priority), C (Low Priority), and D (Excessive).

1 INTRODUCTION

The use of the digital economy is increasingly developing, along with the use of information and communication technology between people. The global impact of information technology is not only on the internet but also on the economic field. There is an interaction between the development of innovation and technological progress and their impact on macroeconomics and microeconomics. The digital economy is the economic sector, including goods and services, when development, production, sales or supply depends on digital technology.

The existence of this digital economy is shown by the increasingly widespread development of business or trade transactions that utilize the internet as a medium of communication and business cooperation between companies and individuals. It is not uncommon for companies/individuals to do business transformation so that they can play optimally in the arena of the digital economy, one of which is by buying and selling through the internet called e-commerce.

Small Medium Enterprises (SMEs) or Usaha Kecil Menengah (SMEs) have an important role in the Indonesian economy. The Indonesian economy is strongly supported by micro and small businesses;

this is seen from the large share of SMEs reaching around 26.3 million (98.33 %) of the total of 26.7 million businesses. From these businesses, SMEs have succeeded in absorbing 53.6 million workers from a total of 70.3 million people (Puslitbang Ketenagakerjaan Republik Indonesia, 2018).

With a very large number, SMEs are able to provide a large number of jobs and play a role in reducing unemployment. Based on the results of Indonesia's Economic Census Year 2016, the number of SMEs dominates economic activity with a proportion of 98.33% of the total business/company. SMEs are one of the main components of local economic development. In conducting its business, SMEs cannot be separated from the need for communication, especially internet media.

The Internet is experiencing very rapid development. With the internet, it is easy and flexible for us to be able to use computers, laptops, cell phones, or smartphones. The development of the internet can be utilized by SMEs to continue to develop its business. But in Indonesia, the ratio of SMEs that have used digital media is still very low. Based on Indonesia's Economic Census Year 2016, only 563 thousand or 2.14% of SMEs in Indonesia have used digital media for their business activities.

Banten Province is one of the newest provinces established in 2000. The benefits from the internet

and the business world are certainly could not be missed by the cities and regencies in Banten Province to support the process of business growth in order to achieve a competitive advantage. The use of the internet for the business world is most visible in the product marketing process, for example, is a growing online business in Indonesia, including in Banten. However, the use of the internet in small micro-businesses in Banten is still very small. According to Indonesia's Economic Census Year 2016, only around 37 thousand businesses or 3.84% that use the internet both for the product marketing process and others. From the picture below it can be seen that only about 2.55% of the internet is used for marketing, this is the basis for this research to conduct training for the community, especially for SMEs in Banten, how important it is to "internet literate" and encourage the use of the internet for marketing even higher. But it is also possible that the low number of internet users in trade or economics activity caused by the lack of information on how to use social media from SME's user, especially for the olds that can't even use the smartphone in small villages in Banten Province.
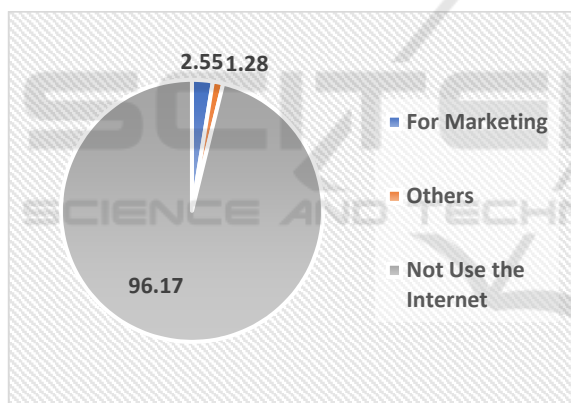

Figure 1 Distribution of Businesses / Companies by Internet Use in Banten Province in 2016 (%)
Source: BPS 2016

Corn is the second-largest harvest food besides rice. The development of corn in Banten Province is carried out in order to meet the needs of food as well as feed so as to increase farmers' incomes. Maize productivity in Banten only reaches 2-3 t/ha dry shelled (BPS Banten, 2011). In Banten Province, there is an animal feed factory that requires 122 tons of corn per month. But the request cannot be fulfilled by farmers.

The use of the internet is as high as it is today, it is very important for businesses to use the internet as a promotional medium to increase their income,

especially for SMEs in Lebak Banten that sell corn product. However, the lack of use of the internet of these SMEs raises a question for an analysis of the study of the quality of social media services, whether websites related to agriculture, especially corn, are in line with user expectations or not. Importance Performance Analysis (IPA) is a method that discusses the comparison of the performance of the service quality of a system that is felt at this time with expectations (importance) so that it can be made a priority recommendation for improvement by the company based on the results of the analysis on the IPA diagram. There is a lot of research that used Importance Performance Analysis (IPA) from the buyers' or consumer's perspectives. Chang (2017) found that user perception of in mobile tourism marketing, important susceptibility is higher than satisfaction; ease of use is the most important; real-time and correct information is important, but not in good satisfactory, should be in the most need to improve. Shia (2016) *et al.* found that indicators that need more attention include providing believable information, timely information, relevant information, etc. The differences of this study are analyzing the user/SME's perspective in terms of e-commerce use.

2 RESEARCH METHODS

This research uses descriptive analysis with quantitative methods. The sampling technique is purposive sampling, wherein this study not carried out by consensus but in a focused manner that considers certain criteria made against the object in accordance with the research objectives. The respondents in this study are SMEs' in Banten Province in the field of corn. This study uses 40 respondents from corn SME's in Lebak, one of the regions in Banten Province.

The data collection was carried out using a questionnaire. After the data was collected, the data was tested using the product-moment validity test and Cronbach alpha reliability test to prove whether the data obtained is truly reliable and valid so that it can be proven correct.

Furthermore, the data that has passed the test is then processed using the method, which is Importance Performance Analysis (IPA), to analyze whether the website has matched its performance with user expectations. After that, the conclusion is drawn based on the formulation of the existing problem.

Cartesian diagram quadrant analysis is used to identify what attributes need to get improvements for performance. The following is an explanation of each quadrant, as in Figure 2.

Information:
- Quadrant I: The main priority is high importance but low performance. In this quadrant shows the factors or attributes that are considered affect the user, but expectations do not match customer desires so that they are not satisfied.
- Quadrant II: Maintain performance i.e., high-performance scores and high expectations. This quadrant is considered good and needed, so it must be maintained.
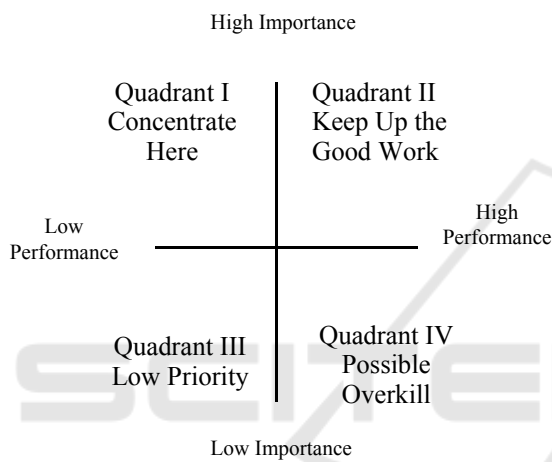

Figure 2. The Original IPA framework
Source: Martilla and James (1977) in Chang (2017)

Information:
- Quadrant III: Low priority, low-performance value, and low importance. This quadrant shows the factors that are a less important influence on users; its existence is average and is considered less important and less satisfying.
- Quadrant IV: Excessive, i.e., high-performance value and low importance. In this quadrant, the performance has been rated very well, but its presence is considered not important by the user, so that its existence is often ignored.

3 RESULT AND DISCUSSION

3.1 The Profile of Respondents

The number of respondents, as many as 40 people, consisted of men and women. The characteristics of respondents in this study by gender are presented in

the figure below. Based on Figure 3, the respondents in this study, around 70% were men, amounting to 28 people, while female respondents were 12 people or 30%.
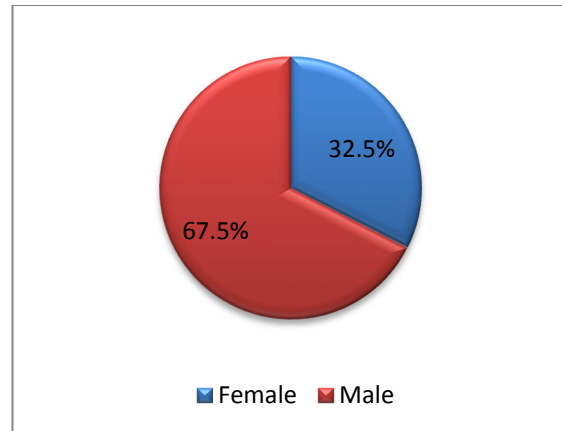

Figure 3. The respondents' profile based on gender.
Source: This study results (2019)

While from Figure 4, it can be seen that the respondents of the age under 29th are five people or 12.5% of the total respondents. Ages 30th-39th are about 18 people with a percentage of 45%. There are 14 people aged 40th-49th, with a percentage of 35% of the number of respondents and three people above the 50th.
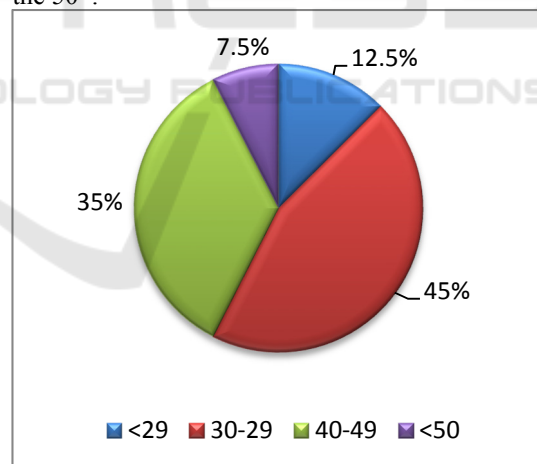

Figure 4. The respondents' profiles based on age.
Source: This study results (2019)

3.2 Importance Performance Analysis' Mapping (IPA)

The results of the validity test show all items of the variables tested invalid conditions (>0.226). This means that all data are valid and can be continued for the next test, which is the reliability test. The results

of the reliability test that all variables greater that Cronbach's Alpha is meaning that all the variables are reliable, so the analyzed data can be trusted and consistent can be used for subsequent testing.

The Importance Performance Analysis (IPA), based on the questionnaire answers given by the respondent, produces the data/ information. This information has been averaged based on the variables used.

Table 1. The average number of Expectations and Performance

Respondents	Expectations.	Performance	GAP
1	4.34	4.17	-0.17
2	4.41	4.07	-0.34
3	4.32	4.10	-0.22
4	4.20	3.98	-0.22
5	4.22	4.02	-0.20
6	4.24	4.02	-0.22
7	4.22	4.07	-0.15
8	4.20	3.98	-0.22
9	4.15	3.93	-0.22
10	4.17	3.80	-0.37
11	4.22	3.80	-0.41
12	4.10	3.95	-0.15
13	4.10	3.98	-0.12
14	4.12	3.80	-0.32
15	4.05	3.95	-0.10
16	4.02	3.95	-0.07
17	3.98	3.95	-0.02
18	4.02	4.05	0.02
19	4.05	4.12	0.07
20	4.07	4.10	0.03
Average	4.16	3.99	-0.17

Source: This study results (2019)

From the mapping results, it is known that the average total for performance/ quality compared to the average expectation is smaller (3.99 for performance <4.16 for expectation), meaning that there is still a gap between quality and expectation with a large mean gap value of 0.17, it can be interpreted that the performance is still far from the user's expectations and still need improvement to achieve the expectations desired by the user. To find out the priority of existing items, and Importance Performance Analysis (IPA) analysis is then performed.

This research uses Importance Performance Analysis (IPA) to see the perception of corn entrepreneurs in adopting e-commerce. Cartesian quadrant analysis is used to identify what attributes need to be improved for performance. From the results of the calculation of expectations and performance obtained an average of the calculation results illustrated by the IPA diagram, as shown in Figure 5.
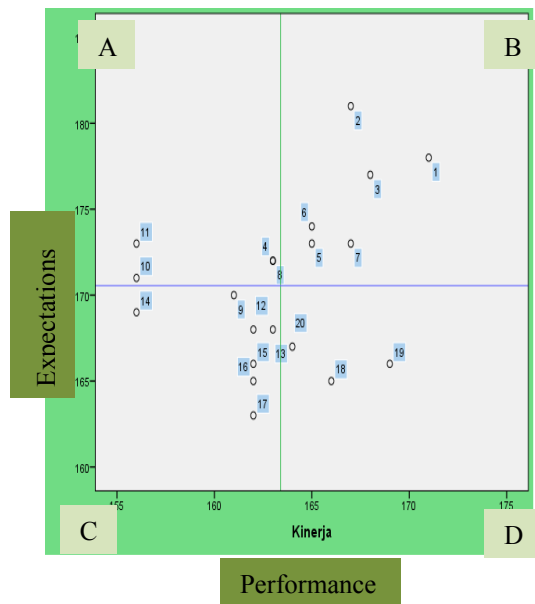
Figure 5. Importance Performance Analysis' Mapping (IPA) (Cartesian Quadrant Diagram

Figure 5 shows numbers 1 to 20; this shows the questions or indicators on the questionnaire that have been distributed to 40 respondents as follows:

1. Is the e-commerce that you use easy to operate?
2. While interacting with e-commerce, do you feel the application is clear and easy to understand?
3. Is the e-commerce that you use easy to use?
4. Does the e-commerce that you use have an attractive appearance?
5. Does the online/ website application design match the type of application? (e-commerce)
6. Does e-commerce express the value of competence? (Competent to be a selling platform)
7. Does e-commerce provide a positive experience for you?
8. Does e-commerce provide accurate information?
9. Does e-commerce provide reliable information?
10. Does e-commerce provide timely information? (Information is always updated)
11. Does e-commerce provide relevant information?
12. Does e-commerce provide information that is easy to understand?
13. Does e-commerce provide complete and detailed information?
14. Does e-commerce provide information in the right format? (data information that states the date or time or lists currency values)
15. Does e-commerce have a good reputation?
16. Do you feel safe to conduct transactions on e-commerce/ online applications/ websites?
17. Do you feel safe about the personal information stored in an online application or website/ e-commerce?
18. Does the e-commerce/ online application/website provide personalized facilities for users?
19. Does the online / website application provide communication facilities between community members?
20. Do you feel confident that online/ website application services are running well and optimally?

3.3 Discussions

1. Quadrant A (Top Priority)

Indicators in quadrant A are the top priority for improvement because quadrant A has important or expected factors for users, but the performance of online applications that are still felt as low does not satisfy the user. Therefore the online application provider used by corn businesses to market their products or carry out buying and selling transactions needs to allocate the resources that are sufficient to improve the performance that already exists. The indicators included in quadrant A are as follows.

a. Indicator number 11, e-commerce provides relevant information.
b. Indicator number 10, e-commerce provides timely information.
c. Indicator number 4, e-commerce has an attractive appearance.
d. Indicator number 8, e-commerce provides accurate information.

2. Quadrant B (Maintain Performance)

The indicators in quadrant B are conditions that must be maintained because the indicators in quadrant B are the pending factor that is expected by the user to be in accordance with existing performance. The indicators located in quadrant B, namely.

a. Indicator number 1, the e-commerce used is easy to operate
b. Indicator number 2, when interacting with e-commerce, the application is clear and easy to understand
c. Indicator number 3, the e-commerce used, is easy to use.

d. Indicator number 5, the online/ website application design, matches the type of application

e. Indicator number 6, e-commerce conveys the value of competence. Competent to be a selling platform.

f. Indicator number 7, e-commerce provides a positive experience.

3.   Quadrant C (Low Priority)

The indicators in Quadrant C are considered low by the user, but their expectations or interests are not considered important by the user, so they are not a top priority for the application provider in improvement. The indicators that are located in quadrant C are:

a. Indicator number 9, e-commerce provides reliable information

b. Indicator number 12, e-commerce provides information that is easy to understand.

c. Indicator number 13, e-commerce provides complete and detailed information.

d. Indicator number 14, e-commerce provides information in the right format.

e. Indicator number 15, e-commerce has a good reputation.

f. Indicator number 16, the user feels safe to do transactions on e-commerce/ online applications/ websites.

g. Indicator number 17, the user feels safe about the personal information stored in an online application or website/ e-commerce.

4.   Quadrant D (Excessive)

The indicator in this quadrant is the performance of the website, which is considered very good, but its importance is considered low by the user, so it is often ignored. The indicators that are located in quadrant D are:

a. Indicator number 20, the user feels confident that the online/ website application services are running well and optimally.

b. Indicator number 18, e-commerce/ online applications/ websites provide personalized facilities for users

c. Indicator number 19, online/ website application, provides communication facilities between community members.

4   CONCLUSION

Recommendations for improvement that can be given based on the results of the IPA quadrant analysis are the indicators in quadrant A, C, and D. In order of

priority, the improvement of quadrant A is the main priority, because the indicators in this quadrant have less performance while their importance is considered very important by the user

Quadrant C, which is a low priority, because the quality of website performance is still considered less by users, but its importance is considered less important. Quadrant D, the indicators considered excessive, because the performance of the website is considered to be very good, but its importance is considered low by the user so that its existence is often ignored. In quadrant D, it is recommended by the manager to allocate the available resources in this indicator to other indicators that still need to improve performance in order to create efficiency.

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