# OODA Loop Strategy for MSME Sustainability During COVID-19 Pandemic

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## ABSTRACT

The coronavirus disease 2019 (COVID-19) pandemic has an impact on economic instability and has an impact on micro, small, and medium enterprises (MSMEs). A survival strategy is needed for the survival of MSME businesses during the COVID-19 pandemic. This study aims to analyse the Observe, Orient, Decide, and Act (OODA) Loop on MSMEs in Banyumas Regency. This research used qualitative research with a case study approach. The population in this study were 31 respondents in the handicraft sector MSMEs in Banyumas Regency. The data collection techniques usedd the method of observation, interviews, and research questionnaires. The results of this study indicate that the survival strategies carried out by MSMEs using the OODA Loop include: In the Observe stage, 31 MSMEs experienced a decrease in income for 4 months from early March to June 2020 with a decline rate of between 25% to 100%; The Orient stage shows that 80% of MSMEs explained that the decline in income was due to a decline in consumer purchasing power; The Decide stage shows several decisions made by MSMEs including continuing to produce by reducing quantity but quality, reducing employees, and creating additional business. Finally, the Act stage was conducting online promotion strategies, adding links, product innovation, following trends, and doing additional business. The results of the study recommend the use of the OODA Loop as a survival strategy for MSMEs so that it can be understood and adopted on an ongoing basis.

**Keywords:** OODA Loop; Strategy; MSME; COVID-19.

## 1. Introduction

The spread of the COVID-19 virus has a negative impact on the country's economy, one of which is Indonesia. Economic growth decreased compared to the same period the previous year and the last quarter of the previous year. From the first and fourth quarters of 2019, which were 5.07% and 4.97% respectively, it decreased to 2.97 in the first quarter of 2020. The decline in the country's

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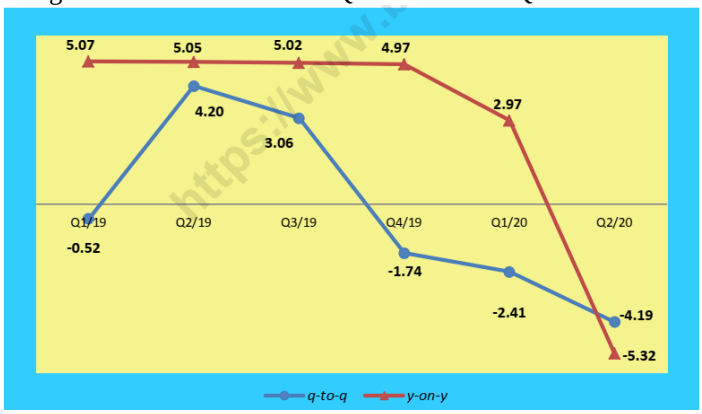
economy was caused by several business sectors, one of which was micro, small, and medium enterprises (MSMEs).

Figure 1. GDP Growth Rate Quarter I 2019 - Quarter II 2020




Source: bps.go.id

MSMEs play an important role in development in Indonesia. MSMEs help the Indonesian economy while maintaining the movement of the domestic real sector. MSMEs also have a role in expanding job opportunities and absorbing workers. However, currently MSMEs are experiencing a slowdown and some are even being shut down. This condition is due to the limited economic activity carried out by MSME actors due to the emergence of the COVID-19 pandemic. The existence of large-scale social restrictions (PSBB) set by the government through Government Regulation Number 21 of 2020 concerning PSBB in the context of accelerating the handling of COVID-19 has made people urged to stay at home and reduce activities outside. This is very important to comply with given the increasing number of COVID-19 cases every day. Based on the latest data as of 30 September 2020, the number of people who have been confirmed positive for COVID-19 in Indonesia has reached 287,008 people, with details of 214,947 people being declared cured and 10,740 people being declared dead (covid19.go.id).

The existence of PSBB due to the COVID-19 pandemic has caused people's purchasing power to greatly reduce MSME products. As quoted from the Organization for Economic Cooperation and Development (OECD), the COVID-19 pandemic has affected the economy, especially MSMEs, both in terms of supply and demand. From the supply side, there was a reduction in the workforce due to unhealthy business conditions, taking care of their children, and other dependents as well as a broken supply chain. Meanwhile, from the demand side, there was a very drastic and sudden decline due to the decrease in income experienced by consumers and the fear of contagion. The results of a survey conducted on MSMEs in several countries show that more than half of MSMEs suffer heavy losses in terms of income, one third are afraid to go out of business without support within 1 month and up to 50% within 3 months (OECD, 2020). The Ministry of Cooperatives and Small and Medium Enterprises (KUMKM) also stated the same thing that the impact of the COVID-19 pandemic was for business actors, especially MSMEs. This can be seen from several problems faced such as decreased sales, difficulty in raw materials, distribution barriers, capital, and decreased production (depkor.go.id).

Based on information from the Central Java Province Integrated Business Service Centre (PLUT) KUMKM, which is located in Banyumas Regency, the MSME sector most affected by the COVID-19 pandemic is the handicraft sector. PLUT KUMKM is a form of synergy of all the potentials of the central government and local governments to provide solutions to problems that hinder and even threaten the business continuity of MSMEs. In addition, it also facilitates MSMEs

who want to increase the capacity and quality of their businesses so that they can grow and develop further (www.plutjateng.id).

Craft MSMEs in Banyumas Regency consist of several fields such as handicrafts for household appliances, accessories, bamboo, batik, metal, and coconut fibre. The problems faced are generally the same, namely the declining business conditions due to the COVID-19 pandemic. For this reason, this study intends to explore the phenomena that occur and help identify the forms of efforts made to overcome these conditions through the OODA Loop.

The study of OODA is a new topic for several researchers, especially in the current situation. Research that discusses OODA analysis on MSMEs is still very limited. Soetjipto (2020) in his research on the resilience of East Java MSMEs through the COVID-19 pandemic showed that almost all business actors experienced a very drastic decline in income as well as constrained marketing, sales, and product distribution. Some business actors try to maintain their business by following government regulations, health and safety protocols through observation (Observe), identification (Orient), decision making (Decide), and action (Act) in an unlimited cycle. Business actors implement OODA as a business resilience cycle by paying attention to any changes that occur from time to time.

In contrast to previous research, in this case, it will examine the OODA Loop in the MSME sector most affected by the pandemic, namely the MSMEs in the handicraft sector. This study aims to analyse the OODA Loop on MSMEs in Banyumas Regency as a survival strategy during the pandemic. The hope is that, through the OODA Loop strategy that has been identified through the efforts made by MSME actors, it can help find opportunities that can be done as a survival effort in the midst of the COVID-19 pandemic. This research is expected to be useful: both theoretically, namely (1) increasing knowledge for students and lecturers, especially regarding OODA Loop analysis on MSMEs; practical benefits, namely (2) being able to provide advice and input for MSMEs in formulating efforts and strategies that need to be carried out to survive during the pandemic, especially through the OODA Loop; and (3) becoming input for academic institutions in doing community service, especially for MSMEs.

## 2. Literature Review

### *1.1. MSME*

MSMEs according to Law Number 20 of 2008 concerning Micro, Small, and Medium Enterprises are small companies owned and managed by a person or owned by a small group of people with a certain amount of wealth and income. The following are the criteria for wealth and income according to the law.

Table 1. MSME Criteria

| **Business Size** | **Criteria** | |
|---|---|---|
| | **Net Worth (Excluding Land and Buildings)** | **Sale (Within 1 Year)** |
| Micro Enterprise | Maximum Rp50 million | Maximum Rp300 million |
| Small Enterprise | Rp50 million - Rp500 million | Rp300 million - Rp2.5 billion |
| Medium Enterprise | Rp500 million - Rp10 billion | Rp2.5 billion - Rp50 billion |

Source: KUMKM

*1.2. OODA Loop*

The OODA was first developed by Colonel John Richard Boyd, a United State Air Force (USAF) fighter pilot, for military purposes (Brehmer, 2005; Cordeiro, 2018; Silvander & Angelin, 2019; Vettorello et al., 2019). OODA Loop is a process of observation (Observe), orientation (Orient), decisions (Decide), and action (Act). This process is iterative and circular. This is done in an effort to improve decision-making at the operational and tactical levels (Osinga, 2007).

The key concept of OODA is the process by which individuals and organisations react to an event. In other words, the OODA concept focuses on strategic thinking about how an entity (individual or organisation) can maintain its existence in conditions of stress and uncertainty.

The OODA concept has been widely adopted by organisations of various sectors, one of which is in the business sector (Vettorello et al., 2019). This is because the OODA principle is quite applicable or easy to apply. The concept of OODA can be described in a decision cycle which is commonly known as the OODA Loop. This cycle consists of four processes that are interrelated with each other and run continuously. The four processes can be seen in the figure below:

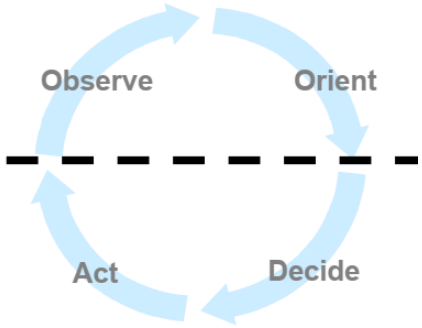



Figure 2. OODA Loop
Source: Rousseau & Breton (2004)

Based on the figure above, the OODA Loop process can be explained as follows:

a. Observe
   Observation is the first step in data analysis of an OODA Loop model where at this stage data is collected using observation of the problems that occur. According to Soetjipto (2020), the activities that can be carried out in the observation step are:
   1) Identifying the current situation.
   2) Collecting facts and data.
   3) Distinguishing the situation before and after the occurrence of the problem.
   4) Open to all possibilities.
b. Orient
   Orientation is a stage in the OODA Loop model in which individuals or organisations analyse and synthesise data that have been previously obtained to form perspectives. This orientation should refer to the latest information obtained in the previous stage and experience that occurred before. Then, this orientation will become a reference for individuals or organisations when making decisions.

c. Decide
After identifying the problems that have been estimated at the orientation stage, the next step is to determine an action to be taken based on the perspective that has been obtained. Individuals or organisations must formulate various policies or decisions that will be taken when facing a problem.

d. Act
The next stage in the OODA Loop model is to take a critical step that refers to a predetermined plan or decision. Through an action, feedback will be obtained which will then return to be observed. It is this reason that makes OODA a cyclical or continuously related method. Thus, each action will be reviewed whether it has been effective and able to become a solution in handling crises or problems.

## 3. Research Methodology

The population in this study were all MSMEs in the handicraft sector in Banyumas Regency. The determination of the sample used non-probability sampling with saturated sampling technique. The number of samples was 31 informants. This study used descriptive qualitative method. Creswell (2008) defined qualitative research methods as an approach or search to explore and understand a central phenomenon. This research strategy was a case study. This study seeked to investigate the phenomenon of the survival of MSMEs during the COVID-19 pandemic, especially in the handicraft sector. This research data used primary data and secondary data. The primary data were data taken or collected directly from the source, namely the owners of MSMEs. The secondary data were obtained through various literatures such as data from the Central Java Province Integrated Business Service Centre (PLUT) KUMKM in Banyumas Regency, articles, books, and official websites to access the latest information about the impact of the COVID-19 pandemic for MSMEs.

Data collection techniques in this study include: (1) Interviews, used to find out more detailed and in-depth information from informants, namely the owners of handicraft MSMEs in Banyumas Regency by using interview guidelines; (2) Observation, carried out on research locations, product prices, product buyers, and other conditions to observe events and cross-check data from interviews with actual conditions; (3) Research questionnaire, containing a list of questions used in interviews; and (4) Documentation, to strengthen the results of interviews and observations made in the form of field notes, photos, and recordings. The triangulation used in this research was source triangulation. Source triangulation was done by digging for truth information through data sources, namely interviewing informants, field observations, and documentation. The form of qualitative data analysis in this study used interactive analysis including data reduction, data presentation, and verification.

## 4. Results

### *4.1. Description of Respondents*

Respondents in this study were all MSMEs in the handicraft sector in Banyumas Regency as many as 31 respondents. The following is a description of the respondents shown in Table 2 below:

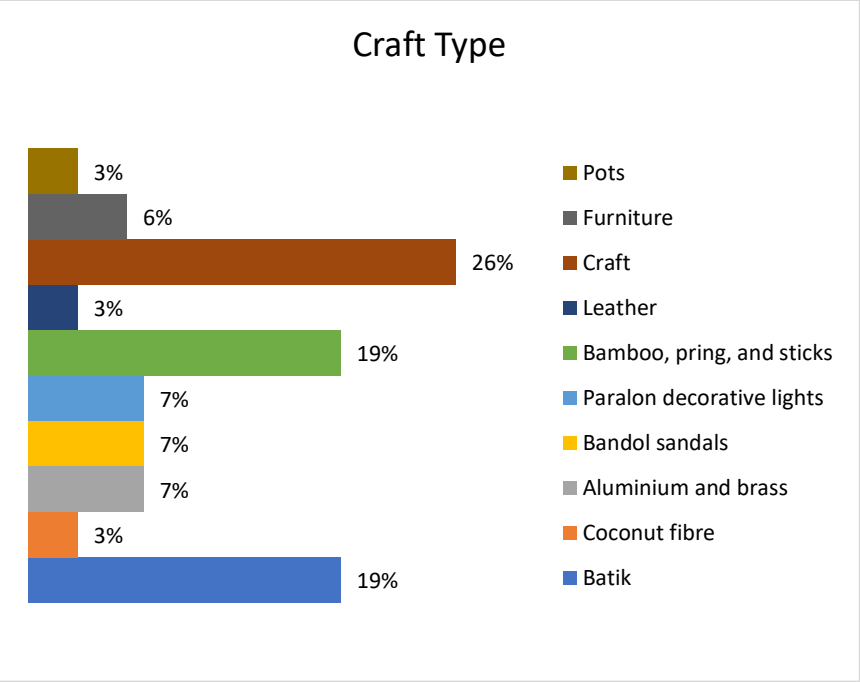
Table 2. Description of Respondents

| Characteristics | Frequency | Percentage (%) |
|---|---|---|
| **Gender** | | |
| Male | 17 | 54,84 |
| Female | 14 | 45,16 |
| **Age Group (Years)** | | |
| 20-30 | 4 | 12,90 |
| 31-40 | 8 | 25,81 |
| 41-50 | 13 | 41,94 |
| 51-60 | 4 | 12,90 |
| ≥ 61 | 2 | 6,45 |
| **Length of Business (Years)** | | |
| ≤ 5 | 15 | 48,39 |
| 6-15 | 13 | 41,93 |
| 16-25 | 1 | 3,23 |
| > 25 | 2 | 6,45 |
| **Last Education** | | |
| Elementary School / Equivalent | 3 | 9,68 |
| Middle School / Equivalent | 12 | 38,71 |
| High School / Equivalent | 10 | 32,26 |
| Diploma | 2 | 6,45 |
| Bachelor Degree | 4 | 12,90 |

Source: Processed Primary Data (2020)

Based on the table above, it can be seen that most of the respondents were male as many as 17 people or 54.84%. Most of the respondents were in the age range of 41-50 years as many as 13 people or 41.94%. Most of the businesses had a business duration of ≤ 5 years as many as 15 businesses or 48.39%. Most of the respondents had the last education of middle school as many as 12 people or 38.71%.

Figure 1. Research Subjects




Source: Processed Primary Data (2020)

From the figure, it can be seen the variety of types of MSMEs in the handicraft sector which is the subject of this research including pots, furniture, craft, leather, bamboo, pring, sticks, paralon decorative lights, bandol sandals, aluminium and brass, coconut fibre, and batik. Most of the subjects in this study came from craft owners by 26%. Next, there are bamboo, pring, sticks, and batik crafts by 19% each.

## 5. Discussion

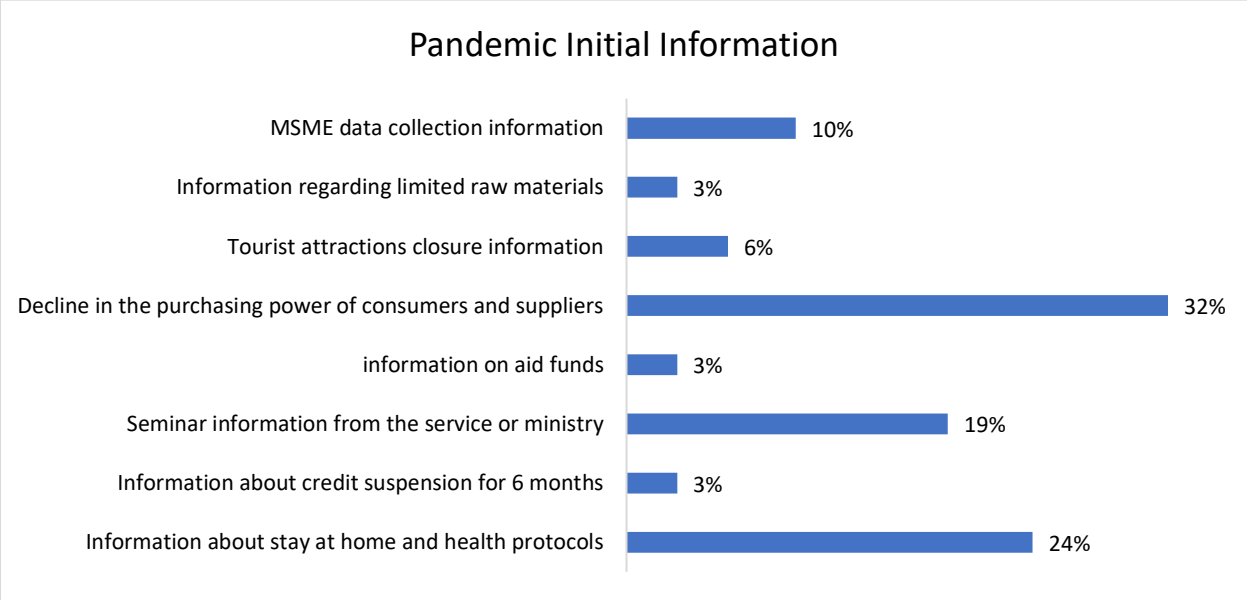
### *5.1. Observation*

In the midst of the COVID-19 pandemic, MSME actors are trying to collect all forms of information about consumers, opportunities, and strategies. This is because most of the handicraft MSMEs experienced a decline in turnover during the COVID-19 pandemic. However, there are some that do not experience a decline and even increase.

The decline in turnover for most MSMEs began to occur from March to July 2020 with the following details: 65% of MSMEs experienced a decline in turnover in March; 13% of MSMEs experienced a decline in turnover in April; 6% of MSMEs experienced a decline in turnover in Juni; and 3% of MSMEs experienced a decline in turnover in July. On the other hand, 6% of MSMEs did not experience a decline, and 3% MSMEs actually experienced an increase. It can be seen that most of the handicraft MSMEs experienced a decline in March as much as 65%.

Based on the results of interviews with 31 handicraft MSMEs in Banyumas Regency, it is known that the actors were trying to collect information related to COVID-19 which can be seen through the graph in Figure 2. Based on Figure 2, it can be seen that most of the handicraft MSME actors were trying to find information about the causes of the decline in the purchasing power of consumers and suppliers by 32%.

Figure 2. Initial Information during the COVID-19 Pandemic

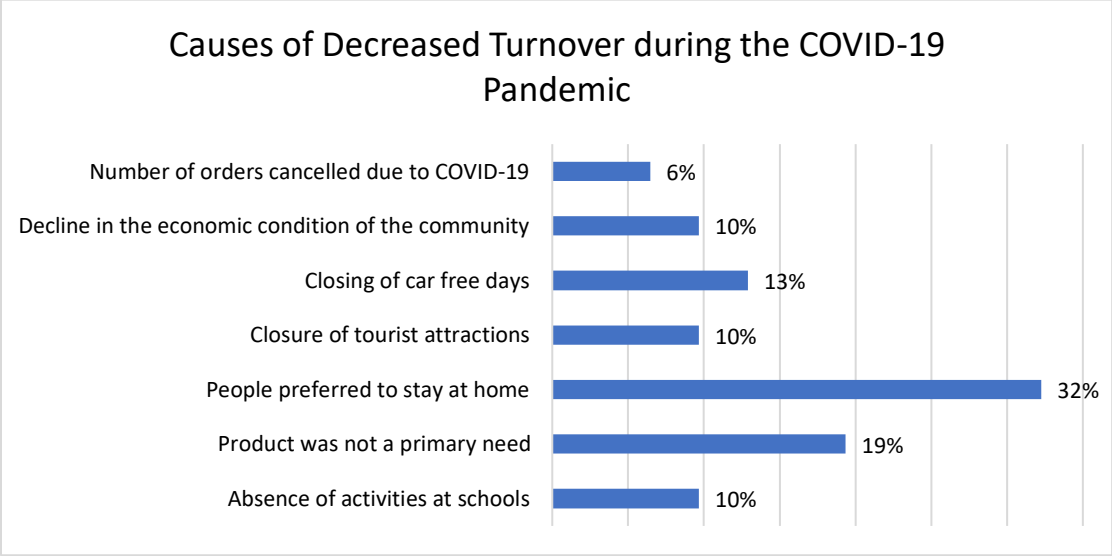



Source: Processed Primary Data (2020)

*5.2. Orientation*

Orientation or consideration was carried out by handicraft MSME actors to overcome the problem of declining purchasing power of consumers or the community, what needs to be improved, optimised, or even eliminated. After knowing this information, MSMEs tried to find out the causes of the decline in the purchasing power of consumers and suppliers. Based on Figure 3, it can be seen that the biggest cause of the decline in turnover during the COVID-19 pandemic was the decline in people's purchasing power because people preferred to stay at home following government recommendations by 32%. In addition, there were also other contributing factors, including: the decline in people's purchasing power because the product was not a primary need by 19%; the closing of car free days resulting in the loss of a place to sell by 13%; the decline in the economic condition of the community, the closure of tourist attractions, and the absence of activities at schools by 10% each; as well as the number of orders cancelled due to COVID-19 by 6%.

Figure 3. Causes of Decreased Turnover during the COVID-19 Pandemic

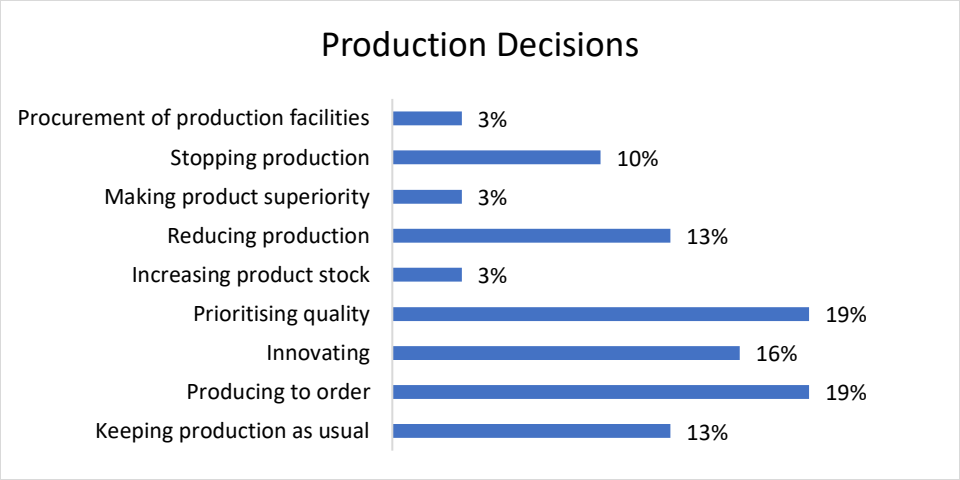



Source: Processed Primary Data (2020)

*5.3. Decision*

The actors of handicraft MSMEs tried to take steps or decisions due to a decrease in turnover due to the reduced purchasing power of the community. Several steps or decisions that would be taken by handicraft MSMEs include aspects of production, marketing, human resources, finance, and competitive advantage. Based on Figure 5, several production decisions include: procurement of production facilities by 3%; stopping production by 10%; making product superiority by 3%; reducing production by 13%; increasing product stock by 3%; prioritising quality by 19%; innovating by 16%; producing to order by 19%; and keeping production as usual by 13%. Based on the results of these interviews, it can be concluded that most of the production decisions made by MSME actors were (1) prioritising quality and (2) producing to order.

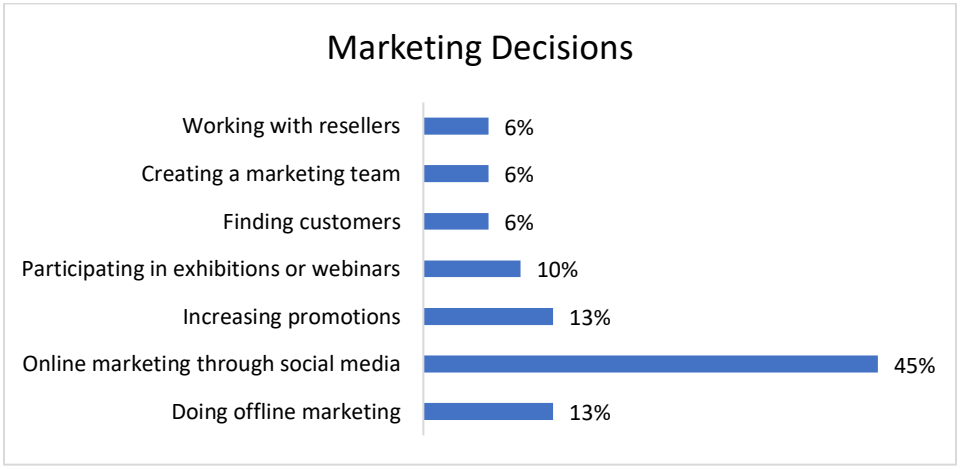
Figure 5. Production Decisions




Source: Processed Primary Data (2020)

Based on Figure 6, several marketing decisions that would be made include: working with resellers by 6%; creating a marketing team by 6%; finding customers by 6%; participating in exhibitions or webinars by 10%; increasing promotions by 13%; online marketing through social media by 45%; and doing offline marketing by 13%. Based on the results of these interviews, it can be concluded that most of the marketing decisions that would be made by MSME actors were doing online marketing through social media.

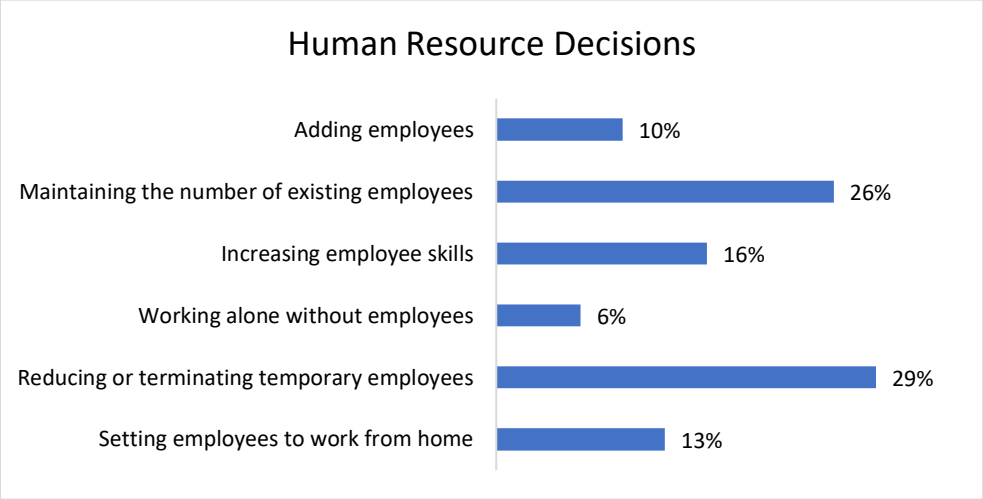
Figure 6. Marketing Decisions




Source: Processed Primary Data (2020)

Based on Figure 7, several human resource decisions that would be made include: adding employees by 10%; maintaining the number of existing employees by 26%; increasing employee skills by 16%; working alone without employees by 6%; reducing or terminating temporary employees by 29%; and setting employees to work from home at 13%. Based on the results of these interviews, it can be concluded that most of the human resource decisions that would be made by MSME actors were reducing or terminating temporary employees.

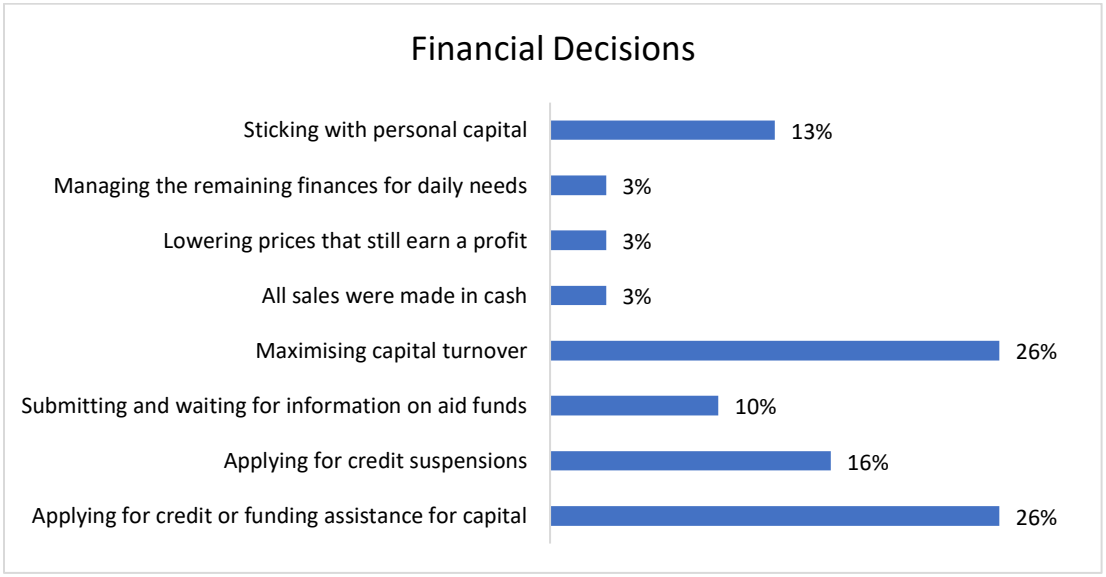
Figure 7. Human Resource Decisions




Source: Processed Primary Data (2020)

Based on Figure 8, several financial decisions that would be made include: sticking with personal capital of 13%; managing the remaining finances for daily needs by 3%; lowering prices that still earn a profit by 3%; all sales were made in cash by 3%; maximising capital turnover by 26%; submitting and waiting for information on aid funds by 10%; applying for credit suspensions by 16%; as well as applying for credit or funding assistance for capital by 26%. Based on the results of these interviews, it can be concluded that most of the financial decisions that would be made by MSME actors were (1) maximising capital turnover and (2) applying for credit or financial assistance for capital.

Figure 8. Financial Decisions

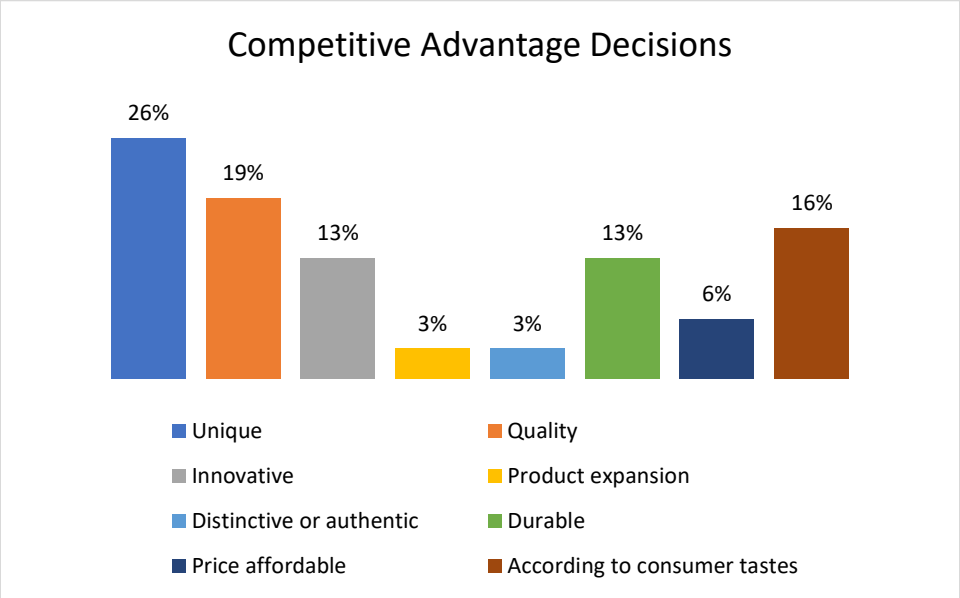



Source: Processed Primary Data (2020)

Based on Figure 9, several competitive advantage decisions that would be made include: unique by 26%; quality by 19%; innovative by 13%; product expansion by 3%; distinctive or authentic by 3%; durable by 13%; price affordable by 6%; and according to consumer tastes by

16%. Based on the results of these interviews, it can be concluded that most of the competitive advantage decisions that would be made by MSME actors are creating product uniqueness.

Figure 9. Competitive Advantage Decisions

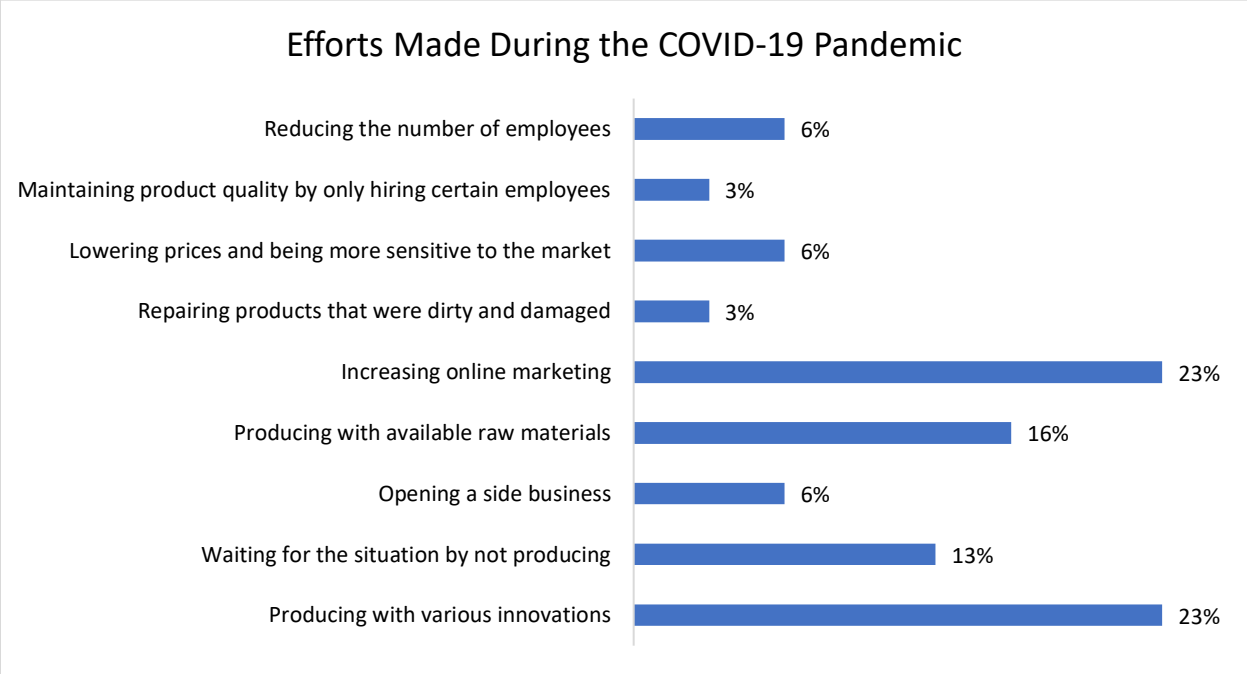



Source: Processed Primary Data (2020)

*5.4. Action*

Based on the decisions that have been made by the handicraft MSME actors, the next step in the OODA Loop model is to take action on the decisions that have been determined regarding production, marketing, human resources, finance, and competitive advantage. Based on the results of interviews with 31 handicraft MSMEs, they have taken action during the COVID-19 pandemic. These efforts include: reducing the number of employees by 6%; maintaining product quality by only hiring certain employees by 3%; lowering prices and being more sensitive to the market by 6%; repairing products that were dirty and damaged due to being stored for too long and marketing to tourist attractions that were starting to open by 3%; increasing online marketing, looking for opportunities through webinars, establishing relationships, and seeking assistance facilities by 23%; producing with available raw materials by 16%; opening a side business by 6%; waiting for the situation by not producing and only selling goods that were in stock by 13%; as well as producing with various innovations, following trends, and being more creative by 23%. Based on the results of these interviews, it can be concluded that most of the actions taken by MSME actors were (1) increasing online marketing, looking for opportunities through webinars, establishing relationships, and seeking assistance facilities, as well as (2) producing various innovations, following trends, and being more creative.

Figure 10. Actions on Decisions That Have Been Determined




Source: Processed Primary Data (2020)

## 6. Conclusion

Based on the results of the study, it can be concluded that most of the handicraft MSME actors experienced a decline in sales, some even could not survive the COVID-19 pandemic. At the observation stage, it is known that most of the handicraft MSMEs were trying to find information about what was happening, namely the decline in turnover caused by the decline in the purchasing power of consumers and suppliers. Furthermore, at the orientation stage, it is known that the biggest cause of the decline in people's purchasing power was because people preferred to stay at home following government recommendations. At the decision stage, most of the handicraft MSME actors tried to take steps or decisions related to production, marketing, human resources, finance, and competitive advantage. The last stage was taking action on the decisions that have been determined regarding production, marketing, human resources, finance, and competitive advantage. The results of the study recommend the use of the OODA Loop as a survival strategy for MSMEs so that it can be understood and adopted on an ongoing basis.

## References

Brehmer, B. (2005). The Dynamic OODA Loop: Amalgamating Boyd's OODA Loop and the Cybernetic Approach to Command and Control. *10th International Command and Control Research and Technology Symposium The Future of C2*, 365–368.

Cordeiro, L. (2018). *Cycle Ooda X Pdca Cycle in the Decisoin Making Process*. *August*. https://doi.org/10.13140/RG.2.2.21416.42240

Creswell, J. (2008). *Educational Research. Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Pearson Prentice Hall

*Osinga, F.P.B. (2006). Science, Strategy and War: The Strategic Theory of John Boyd.* London

Rousseau, R., & Breton, R. (2004). The M-OODA: A model incorporating control functions and teamwork in the OODA loop. *Proceedings of CCRTS, 2004*(418), 1–18. http://www.dodccrp.org/events/2004_CCRTS/CD/papers/175.pdf

Silvander, J., & Angelin, L. (2019). Introducing intents to the OODA-loop. *Procedia Computer Science*, *159*, 878–883. https://doi.org/10.1016/j.procs.2019.09.247

Soetjipto, N. (2020). Ketahanan UMKM Jawa Timur Melintasi Pandemi COVID-19. In *K-Media*.

Vettorello, M., Eisenbart, B., & Ranscombe, C. (2019). Toward better design-related decision making: A proposal of an advanced ooda loop. *Proceedings of the International Conference on Engineering Design, ICED*, *2019-Augus*(AUGUST), 2387–2396. https://doi.org/10.1017/dsi.2019.245

OECD. "SME Policy Responses." Diakses 23 April 2020. https://read.oecdilibrary.org/view/?ref=119_119680- di6h3qgi4x&title=Covid-19_SME_Policy_Responses

www.plutjateng.id

https://www.bps.go.id

https://www.covid19.go.id

https://www.depkor.go.id