Digital transformation readiness: How ‘Sonjo Pangan’ movement assists SMEs’ product distributions during COVID-19 Pandemic

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Abstract: COVID-19 was initially discovered in China on December 31, 2019. One of the impacts of the COVID-19 pandemic in several countries includes the enactment of policies to restrict human activities which caused economic problems for SMEs. The government efforts to tackle this issue are various such as launched a smartphone application for SMEs. Sonjo Pangan (Sonjo Food) refers to a movement initiated by a group of people expecting to help SMEs who are vulnerable to COVID-19. Sonjo assisted SMEs to sell their product online. This research aims to measure the digital readiness level of Sonjo Pangan SMEs and to explore how Sonjo Pangan helps SMEs during pandemic. Data had been collected by online questionnaire shared in their main media platform such as WhatsApp Group. Analysis was conducted by mix-method analysis. The result of this research indicated that Sonjo Pangan assisted SMEs to distribute their product in the city, intercity, even inter-island by WA group and through a free online platform. Sonjo Pangan SMEs thus obtained the advantages such as improvements in technology skills and development of social capital.

1. Introduction

COVID-19 was initially discovered in China on December 31, 2019, rapidly transmitted worldwide. The director-general of the World Health Organization (WHO) stipulated COVID-19 as a pandemic on March 11, 2020 [1]. The impact of the COVID-19 pandemic in several countries was the enactment of policies to restrict human activities, which in Indonesia was known as the Pembatasan Sosial Berskala Besar (Large-Scale Social Restrictions, or PSBB) policy and the imposition of lockdowns. As a result, there was a decline in economic performance as indicated by a slowdown in economic growth leading to an economic contraction, especially on Small Medium Enterprises (SMEs).

The government of Jakarta as the capital city of Indonesia said that since the pandemic, SMEs’ turnover had been decreased up to 70% [2]. The government efforts to tackle this issue were various such as launched smartphone application for SMEs. Samarinda, one of the city located in East Kalimantan Indonesia, launched an applications for SMEs as a substitution of the offline market during Ramadhan, named ‘Behambinan’ [3]. Kutai Timur Regency, East Kalimantan, Indonesia also launched the same application named ‘MyAspal’ [3]. In addition, Jakarta’s government launched an online shopping service in the traditional market through the Instagram account @perumdapasarjaya [3].
Based on the survey of World Giving Index in 2018, Indonesia had the highest potential in social capital[4]. Social capital was defined as where humans have the willingness and ability to interact together with other people to solve problems along with human resources owned by both private and public resources [5]. This was implemented in a movement focused on helping people who were vulnerable to COVID-19 like SMEs named ‘Sonjo (Sambatan Jogja)’ Movement. Sonjo which was formed in the Special Capital of Yogyakarta, Indonesia is using WhatsApp Group as its main media to communicate with each other. From March 24, 2020, until May 23, 2021, it had been developed into 18 WhatsApp Groups (WAGs). The divisions were various such as Sonjo Pendidikan (education), Sonjo Wedding, Sonjo Husada (health), Sonjo Pangan (Food-1 and Food-2), etc. The objects of this research were Sonjo Pangan-1 and Sonjo Pangan-2 since the division had the largest number of members and was created in March 2020 when the pandemic had just entered Indonesia.

Digital transformation became an umbrella for the term of digitization and digitalization [6]. Digital transformation is also defined as digital technology use which might help business development and affect a whole life aspect of the customers [7,8]. Introducing Information and Communication Technology (ICT), collecting data, and developing software for paperless communication are also a part of the digital transformation process [9]. Industry 4.0 Maturity Model consists of 9 (nine) dimensions: strategy, leadership, customers, operational, culture, people, government, ad technology [10]. Smart Manufacturing Maturity Model for SMEs (SM³E) consists of financial, people, strategy, process, and product [11]. Others, Digital Readiness Level 4.0 Model consists of 5 dimensions: strategy, people, process, technology, integration. Various digital readiness measurement models have been utilized for assessing SMEs. Since the existence of COVID-19, there is a digital readiness model added variable about extreme phenomenon. A study to determine gaps in organizational resilience in the face of threats and the reality of an extreme events also measured by these following framework categories: resourcefulness, technical system, organizationally, and rapidity [12].

The research aims to measure the digital readiness of Sonjo Pangan SMEs and how Sonjo Pangan helped SMEs facing this COVID-19 pandemic. Sonjo was preferred because the initiator came from civil society and Sonjo did not collect the money from anyone even the government. This movement was free but it had been contributing big changes in every aspect such as SMEs digitization and helped other people who were vulnerable to COVID-19.

2. Methods
This research utilized a mix-method analysis, involving 44 respondents from Sonjo Pangan-1 and Sonjo Pangan-2 WhatsApp Group by an online questionnaire through a google form. Scoring was utilized for each dimension, further described by using qualitative analysis. Data visualization was presented through a distribution map, statistic table, and diagram. The strategy dimension consisted of several variables including: digital transformation visions, online shop existence, and digital transformation motivations. People dimensions formed by the experience of leading organizations, employee ownership in SMEs, last education, self-learning about SMEs digitization, and the perception about social capital.

The technology dimension described what hardware was utilized for managing their online shops, the existence of google maps links directed to the online shops, product delivery method, payment method, and acquisition customers from adapted technology. Rapidity dimension was added since the COVID-19 pandemic pulled out SMEs to quickly decide what would they do with their online shop to keep it alive. This dimension consisted of several ways to tackle the pandemic issues which respondents could choose in multiple. The last dimension used was financial which was about online shop development budget, financial records, and SMEs turnover before and after the pandemic.

Thus, those dimensions would be scored based on each question’s value and ranked. The mean of each dimension would be presented in the crosstab table and would be identified which dimension took the higher or lower score in each rank. This would be a result of The Digital Transformation readiness.
3. Results and Discussion

3.1 Strategy
The strategy dimension aims to find out what digital transformation strategies are taken by Sonjo Pangan SMEs, especially during this pandemic. As many as 32% of SMEs have a digital transformation-related strategy but it is not detailed. Another research also resulting that 50% of the companies studied already have a digital transformation strategy but they do not have a road map [13]. The results of another research also show that the overall strategy only has a value of 2.7 out of a total value of [10]. The mindset that technology could bring SMEs into the international market must be implanted. Therefore, Sonjo Pangan frequently conducts web seminar which presents inspiring people whose online shop extending to national even international as an exporter.

3.2 People
The scope of this dimension includes leadership experience, recent education, views of social capital, entrepreneurial experience, and partner ownership in managing a business. Leadership is an important thing that must be present in SME actors. The best way to measure the success of SMEs is seen from the leaders who can be the owners of the SMEs themselves [14]. A leader has the authority to make decisions that can have a positive impact on the business being run [15]. The survey results indicate that as many as 48% of respondents have never led an organization such as being the head of the RT (Rukun Tangga/ Neighborhood Association), dasawisma (Female Neighborhood Association), and so on. As many as 87% respondents manage their SMEs alone or without a partner, and as many as 18% have partners. In selecting a partner, approximately 22% respondents prefer to recruit foreigners and 77% prefer to recruit family. Sonjo Pangan plays role in building people skills in marketing their products such as holding a web seminar which discuss about how to make a digital poster, how to sell products in social media or marketplace, renew the safe and higienic packaging, etc.

3.3 Technology
Technology is the most important dimension in breaking the physical geographic limit. Many things have changed by technology such as the enabled e-payment and the ability to order online taxis to deliver their product to customers. The SMEs in Sonjo Pangan had already adopted the Information, Communication Technology (ICT) since this COVID-19 pandemic to sell and distribute their products. As we could see in figure 1, the location of the SMEs is mostly in Sleman Regency and Bantul Regency. Even in Gunungkidul, there are at least 2 SMEs.

Figure 1. The location distribution of Sonjo Pangan SMEs
(Source: Online questionaire, 2021)
Most of them had been distributed their products in the city, intercity, even inter-island because of the enabling technology which is smartphones and WhatsApp. Figure 2 showed the map of product distribution flow. Most of the distribution was flown in the city because of the easiness, affordable shipping fee, and also the guaranteed quality of its product. However, some SMEs have distributed their products to inter-island such as Sulawesi and Sumatera upon obtaining the information on how to make frozen packaging safely arriving regardless the distance of destinations.

Figure 2. The product distributions map of ‘Sonjo Pangan’ SMEs  
(Source: Online questionnaire, 2021)

Figure 2 showed that most of the product distributions revolve in the Special Region of Yogyakarta (Sleman Regency, Yogyakarta City, Bantul Regency, Kulon Progo Regency, and Gunungkidul Regency). That was happened because of Sonjo Pangan was established in Yogyakarta and the main target is the Special Region of Yogyakarta itself. Besides that, it was affected by the easiness of transport such as the easiness to order online taxis and the short distance from the seller to deliver their product to the customers. Nevertheless, some SMEs has already marketed their product into other city even island such as Kampar, Jambi, Bengkulu Utara, Sabang, Medan, Bener Meriah, and Manado. It was affected because Sonjo had introduced them how to do the online market, how to package their products safely using the frozen technique, etc by their Webinar. The wider coverage area of product distributions was also one of the indicators that SMEs had a higher stage of digital readiness because they could sell their products higher online. This will make a complementary relation between city/regency when products easily get in the origin with the lower price and would be resold in the region, where it is relatively difficult to find those products. This becomes one of the implementations of rural-city economic by purchasing the products from Java, which offers an easier means of getting the products further resold to people in their region with higher price due to product difficulty.

One of the respondents stated that since she joined Sonjo and its webinar, she could do other things from her smartphone. Before COVID-19, she only used her smartphone for chatting on WhatsApp, but then after COVID-19, she forced to learn new things from her smartphone especially for selling her product since she is a butcher. She learned new things she could do in her smartphone from Sonjo’s webinar which is how to make online posters. The online posters resulting higher customers day by day and increases their economic during this pandemic. Besides creating the online posters, she also learned the new things how to use google maps for delivering orders. Therefore, improving online integrated
service application and internet access are the important things to do in the future so people in every area could use internet and technology wisely [16].

3.4 Rapidity

Rapidity refers to a dimension that will determine how SMEs take steps and decisions in dealing with these extreme conditions. The most chosen decision-making by SMEs since the COVID-19 pandemic is the implementation of online shops. This decision was the right decision to keep running their economy. The decision to "add products due to changing consumer preferences" was chosen because, since the pandemic, people's needs have changed. The community prioritizes buying raw materials, and also Alat Pelindung Diri (APD)/Personal Protective Equipment (PPE) such as masks, gloves, and hand sanitizers. The most chosen option is building an online shop. Sonjo movement serves as a media in encouraging SMEs to manage the online shops.

3.5 Financial

The financial dimension discusses the financial side of Sonjo Pangan SMEs, including: the number of costs budgeted for developing online stores, the need for new tools, financial recording, forecasting, and also turnover. The average monthly turnover of the 44 respondents before the pandemic was IDR 29,948,864 and after the pandemic, the turnover decreased by 57% with an average of IDR 17,127,273. Some SMEs record their financial flow either in Microsoft excel or by manual using paper. Some of them also had tried to be professional by separating their personal and business money. They also set a budget for delivering products or giving some bonus to customers.

3.6 Sonjo Pangan SMEs Digital Readiness Level

Sonjo Pangan has provided an alternative for SMEs in breaking the geographic/physical limits since the pandemic so they could continue their economies. The descriptive statistic indicated that the highest readiness based on the Mean is People dimension (62.61), followed by Strategy (59.77), Technology (31.59), and then Rapidity (20.8). Lower ‘standard deviation’ value than ‘mean’ value means that the mean was capable enough to represent the average data. Table 1 indicates that standard deviation is lower than mean for each dimension (Strategy: 32.349<59.77; People: 21.053<62.61; Technology: 13.967<31.59; Rapidity: 15.956<20.8; and Financial 14.979<34.77).

| Table 1. Descriptive statistics |
|---------------------------------|
| **Descriptive Statistics**      |
| N | Range | Minimum | Maximum | Mean | Std. Deviation | Variance |
|---|-------|---------|---------|------|----------------|---------|
|   | Statistic | Statistic | Statistic | Statistic | Std. Error | Statistic | Statistic |
| Strategy | 44 | 115 | 20 | 135 | 59.77 | 4.877 | 32.349 | 1046.459 |
| People | 44 | 89 | 31 | 120 | 62.61 | 3.174 | 21.053 | 443.219 |
| Technology | 44 | 50 | 10 | 60 | 31.59 | 2.106 | 13.967 | 195.085 |
| Rapidity | 44 | 60 | 5 | 65 | 20.8 | 2.405 | 15.956 | 254.585 |
| Financial | 44 | 60 | 0 | 60 | 34.77 | 2.258 | 14.979 | 224.366 |

Source: Statistic analysis, 2021

The Digital Transformation (DT) readiness level were obtained from the total of all the dimensions scores. Table 2 showed up the average for each dimension based on the DT Readiness level. Level 1 has the average of Strategy: 32, People: 45, Technology: 21, Rapidity: 14, and Financial: 28. Level 2 has
the average of Strategy: 33, People: 70, Technology: 33, Rapidity: 20, and Financial: 37. Last, Level 3 has the average of Strategy: 111, People: 85, Technology: 54, Rapidity: 42, and Financial: 46.

Table 2. Dimensions mean

| STRATEGY | PEOPLE | TECHNOLOGY | RAPIDITY | FINANCIAL | DT READINESS LEVEL |
|----------|--------|------------|----------|-----------|-------------------|
| 32       | 45     | 21         | 14       | 28        | 1                 |
| 33       | 70     | 33         | 20       | 37        | 2                 |
| 111      | 85     | 54         | 42       | 46        | 3                 |

Source: Statistic analysis, 2021

The digital transformation readiness was classified into three stages as shown below:

- Level 1: SMEs have low readiness in all dimensions, especially the rapidity dimension, conducted when there are extreme events such as the COVID-19 pandemic.
- Level 2: SMEs have started to have good readiness of Human Resources (People), but still need improvement in the other 4 dimensions (Strategy, technology, financial, and rapidity).
- Level 3: SMEs already have a well-thought-out future planning strategy. Value distribution tends to be high evenly across the dimensions of people, technology, financial, and rapidity. Therefore, SMEs with level 3 readiness are ready to penetrate the wider business environment, such as the marketplace.

Most of Sonjo Pangan SMEs were in the second stage of digital transformation level which indicates that the People dimension was sufficient for SMEs' basic development, despite requiring improvement for the other 4 dimensions. Improvement to technology especially become the important thing to do because this digital transformation was about how people using technology as well so it would give much more advantage for their economy. In line with that, technology is the most matter thing to enable in every transaction. By using technology, SMEs could distribute their products wider even to inter-island where they couldn’t be connected without technology. With the result that the economy will spread evenly either in city or regency even in the rural.

Figure 3 shows the amount of respondent who were in the 1st, 2nd, and 3rd level of Digital Transformation Readiness (DT Readiness). There are 17 respondents who are in the 1st level of DT Readiness, 20 respondents in the 2nd level of DT Readiness, and 7 respondents who are in the 3rd level of DT Readiness.

![Digital Transformation Readiness Level](image)

Figure 3. Digital transformation readiness level (Source: Statistic analysis, 2021)
4. Conclusion
Due to the COVID-19 pandemic, a free online movement or a community like Sonjo Pangan was very helpful to support digital transformation for SMEs. But, because of the phenomenon of forced digital transformation, some SMEs don’t have enough capacity to manage their online shops due to the lack of technology with the result that most of Sonjo Pangan SMEs were in the second stage of digital transformation readiness.

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