

## Research Article

# Pentahelix Business Collaborations to Increase MSMEs' Post-pandemic Performance

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**Abstract.**

Indonesia, in early 2020, experienced a major impact on the decline in the national economy, including the MSME sector due to the COVID-19 pandemic. This study aimed to determine the obstacles faced by 21 MSMEs during the COVID-19 pandemic and to find out whether pentahelix collaborations had been implemented by the 21 MSMEs in the Medan Labuhan District as an effort to overcome the business constraints faced and to improve the MSMEs' performance in the context of economic recovery after the COVID-19 pandemic. Business collaborations carried out in MSME recovery programs are often referred to as the pentahelix model. The pentahelix model involves five stakeholders, namely, academics, businesses, communities, governments, and the media. The pentahelix model is a socio-economic development model involving collaborations and partnerships between five different roles. Using a descriptive method with a qualitative approach, this study was conducted on 21 MSMEs engaged in traditional snack and handicraft businesses in Medan Labuhan District as research objects. Data were collected using interviews and observations.

Several obstacles were faced by MSMEs in Medan Labuhan district during the COVID-19 pandemic. Fifteen MSMEs experienced marketing-related problems, two had capital-related problems, and four had decreased-sales-related problems. Additionally, 17 MSMEs were found to have implemented pentahelix collaborations involving academics (Universitas Sumatera Utara, Universitas Muhammadiyah Sumatera Utara, Universitas Islam Sumatera Utara, and Universitas Harapan Medan), the government (Medan Labuhan District Government, Medan City Government, and the Office of Cooperatives and MSMEs of Medan City), businesses (Bank Sumut and BRI), communities (independent women's SMEs, Family Welfare Empowerment Program, and Family Hope Program), and the media (Facebook, WhatsApp, and Instagram).

MSMEs in Medan Labuhan District were suggested to optimize business collaborations under the pentahelix model in order to overcome the obstacles posed by the COVID-19 pandemic. In addition, each stakeholder in the pentahelix model should strengthen synergy and focus attention on the use of social media to help those MSMEs market their products. Finally, banks are advised to help those MSMEs overcome the capital constraints.

**Keywords:** business collaborations, Pentahelix, Social Media, MSME performance.

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## 1. INTRODUCTION

In early 2020, the world was shocked by the emergence of a new type of virus called SARS-CoV-2, which causes a disease called Corona Virus Disease 2019 (COVID-19). COVID-19 is an intolerable disease with an intense respiratory disorder caused by the virus. This disease was first discovered in December 2019 in Wuhan, the capital of China's Hubei Region, from which it then spread globally. The World Health Organization (WHO) declared COVID-19 as a global pandemic on March 11, 2020. This WHO decision was issued when COVID-19 had spread to 118 countries and contaminated more than 121,000 people around the world. The magnitude of the spread of this virus was significant, permeating the whole world with all countries feeling the impact, including Indonesia. The viral transmission occurs through contact with the virus, which paves the way for the virus to enter open mucosa [1]. Data show that as of September 15, 2021, there were a total of 225,680,357 confirmed cases of COVID-19 in the world, and 4,178,164 people in Indonesia alone were confirmed to be exposed to the virus [2]

The government issued official directives on the COVID-19 pandemic at the end of March through Presidential Decree Number 11 of 2020 on the Establishment of the Corona Virus Disease 2019 (COVID-19) Public Health Emergency and Government Regulation Number 21 of 2020 on Large-Scale Social Restrictions. To regulate the society and accelerate the handling of COVID-19, it was considered important to emphasize social distancing with the intention of limiting individual movements and to require people to stay at home if there was no urgent need. Certainly, this had restricted MSMEs' activities and reduced the number of consumer visits to physical shops compared to normal days [3].

The pandemic has had a major impact on the decline in the national economy, including the MSME sector. Based on a survey by Katadata Insight Center (KIC), 82.9% of MSMEs were facing the negative effects of the COVID-19 pandemic. As many as 56.8% of MSMEs were in bad conditions, and only 14.1% were still in good conditions[4]. Therefore, Indonesia's House of Representatives (DPR) through related commissions needs to provide support and pay attention to the implementation of government policies to restore MSMEs, which will ultimately enable vigorous economic growth[5]. Business collaborations under the pentahelix model is a suitable concept to improve MSMEs' performance in order to restore the economic conditions. As stated by Mustikorini Indrijatiningrum, the Deputy Assistant for Regional Development Equalization with

the Coordinating Ministry for Human Development and Cultural Affairs, collaborations under the pentahelix model is the key to improving economic conditions. With people's economy suffering from the pandemic, the government, the business world, universities, communities, and the media must work together for successful regional growth .

Business collaborations carried out in MSME recovery programs are often referred to as the pentahelix model. The pentahelix model involves five stakeholders, namely, academics, businesses, communities, governments, and the media. The pentahelix model is a socio-economic development model involving collaborations and partnerships between five different roles. The key to the progress of this model is the existence of solid synergy and responsibility between partners in working together [6]

The pentahelix model is often used to describe business partnerships carried out in MSME recovery programs. Five roles form the pentahelix and work together in a business collaboration. The pentahelix concept is a socio-economic growth strategy that involves partnerships and cooperation among five different roles. Collaboration and a strong sense of responsibility among partners are essential for the success of this strategy [6].

Pentahelix collaborations as an important part in government efforts are expected to strengthen the local regional economy by empowering MSMEs to improve performance. The government provides a supportive business climate through policies, academics provide education on various relevant management concepts and a skilled workforce, businesses and communities provide support for MSMEs, and the media provide promotional means for MSMEs. Pentahelix collaborations are expected to play a concrete role in supporting the performance of MSMEs [7].

As stated by [8], many studies on the pentahelix model have been conducted in various countries. However, the pentahelix model has been receiving small attention in Indonesia, especially when it concerns efforts to improve the performance of MSMEs. Some pentahelix studies focused exclusively on the tourism sector. It is important to pay more attention to MSMEs in order to restore the national economy in the aftermath of the COVID-19 pandemic.

This paper is part of a study on 21 MSMEs in Medan Labuhan District, Medan City, North Sumatra Province, following a pre-research activity in which five MSME business actors in Medan Labuhan District were interviewed. From the results of these interviews, it was found that the MSMEs were experiencing obstacles related to decreased income, sub-standard marketing, and a lack of business capital. Therefore, the author intended

to conduct research on collaborative innovation strategies under the pentahelix model and digital marketing to help MSMEs accelerate the recovery process in order to improve their performance.

The study focused on finding out the obstacles faced by 21 MSMEs in Medan Labuhan District during the COVID-19 pandemic and on whether the MSMEs had engaged in pentahelix collaborations as an effort to overcome the business constraints that they were facing to improve their performance in the context of post-COVID-19 economic recovery.

## 2. RESEARCH METHODS

This research used a descriptive method with a qualitative approach. Meanwhile, the sources in this study were 21 MSME actors in Medan Labuhan District. This study used interviews and observation as data collection techniques. Data analysis was carried out using four kinds of analysis techniques, namely, data collection, data reduction, data display, and verification and confirmation of conclusions.

## 3. RESEARCH RESULTS AND DISCUSSION

### 3.1. Research Results

#### 3.1.1. The Constraints Faced by MSMEs in Medan Labuhan District

The results of interviews with 21 informants regarding the obstacles faced by MSMEs in Medan Labuhan District can be seen in the following table.

TABLE 1: The Constraints Faced by MSMEs in Medan Labuhan District.

Field	Quantity (People)
Marketing	15
Sales	4
Capital	2
Total	21

Source: Processed primary data, 2022

The data presented in Table 1 show that of the 21 sources analyzed, 71% or 15 people expressed that MSMEs in Medan Labuhan District faced constraints in the marketing

sector, 19% or four people stated that the constraints were related to sales, and 10% or two people remarked that the constraints were related to business capital.

### 3.2. The Implementation of Pentahelix Business Collaborations in Efforts to Improve MSME Performance in Medan Labuhan District

The results of the interviews conducted related to the application of pentahelix business collaborations in efforts to improve the performance of MSMEs in Medan Labuhan District were calculated from the application of the helixes: the triplehelix (academics, businesses, communities), the quadruplehelix (academics, businesses, communities, governments), and the pentahelix (academics, businesses, communities, governments, and the media). The results can be seen in the table below.

TABLE 2: The Implementation of Pentahelix Business Collaborations in Improving MSME Performance.

Application of the Helixes	Quantity (People)
Triplehelix	0
Quadruplehelix	4
Pentahelix	17
Total	21

Source: Processed primary data, 2022

Based on the table above, the majority of the MSME actors (17 people) applied the pentahelix to improve their business performance, while the rest (four people) synergized with the quadruplehelix, leaving out the media.

## 4. DISCUSSION

### 4.1. The Constraints Faced by MSMEs in Medan Labuhan District

Based on the results of the research, it is known that MSME players in Medan Labuhan District were experiencing difficulties in terms of marketing. Besides, there were also those that experienced a lack of venture capital and those that experienced problems in increasing sales. The COVID-19 pandemic generally made MSMEs everywhere feel the same way, but fortunately MSME actors in Medan Labuhan District were still able to survive in various ways.

As a result of the pandemic, the consumer purchasing power decreased and the economy worsened. To stop the spread of COVID-19, most marketplaces and shops were forced to close. Government restrictions caused merchants to lose their customers. Like it or not, MSME actors were urged to try various methods to prevent more losses due to the decisions taken in the chain of the spread of COVID-19. Nonetheless, these MSME actors could still continue their businesses and make peace with the situation.

To maintain their businesses, MSMEs in Medan Labuhan District used various strategies. Some improved their business performance by utilizing the social media in order to reach the market, while some others made innovations to survive. Further information is presented in Table 3.

TABLE 3: The Recovery Strategies for MSME Actors in Medan Labuhan District After the COVID-19 Pandemic.

Recovery Strategies	Quantity (People)
Utilize Social Media	10
Product Innovations	4
Adjust the Selling Price	7
Total	21

Source: Processed primary data, 2022

Based on Table 3, the strategies utilized by MSME actors in Medan Labuhan District in general were to use technologies for digital marketing, make product innovations, and adjust the selling prices. As many as ten MSMEs took advantage of digital media to survive. More about the above problems can be explained as follows.

**a. Utilize the Social Media for Digital Marketing**

The social media can be used to develop new digital markets that are more accessible and have a wider market reach. Facebook, Instagram, and WhatsApp are some of the social media platforms that can be used. The social media affects the performance of MSMEs in a number of ways, including by lowering transaction costs, increasing sales, and reducing operational costs. This is in line with the research conducted by [9], whose results indicated that the use of the social media is an effective means of supporting the running of MSMEs.

**b. Make Product Innovations**

MSMEs create products to keep their businesses afloat. To ensure the continuity of their business operations, they make product innovations following market demands. They sustained their operations during the pandemic by developing new products in response to customer requests. This is in line with the research conducted by [10], whose

results indicated that by innovating products, MSMEs will find it easier to improve their performance.

### **c. Adjust the Selling Prices**

Business actors also adjust product prices according to the economic status of the community. Business actors must adjust prices to be able to enter the market during the pandemic because the pandemic has affected individuals' behaviors when making purchases. This is in line with the research conducted by [11], whose results showed that price policies affect the sales performance of MSMEs.

It can be concluded that the strategies carried out by MSME actors in Medan Labuhan District constituted a good step to improving their business performance. The MSMEs promoted their businesses on various social media platforms such as Facebook, Instagram, and WhatsApp. To maintain the continuity of their businesses, business actors also innovated their products and adjust the prices according to the economic capabilities of the local community.

#### **4.1.1. The Implementation of Pentahelix Business Collaborations in Efforts to Improve MSME Performance in Medan Labuhan District**

The pentahelix model was often used to describe business partnerships carried out in MSME recovery programs. The pentahelix concept is a socio-economic growth strategy that involves partnerships and cooperation among five different roles. Collaboration and a strong sense of responsibility among partners are critical to the success of this strategy. The roles of the five stakeholders in efforts to improve MSME performance in Medan Labuhan District are further explained as follows.

### **c. Academics**

In pentahelix collaborations, academics are conceptors on such affairs as the standardization of MSME procedures, product certification, and human resources' competencies. They serve as sources of knowledge that have access to the latest and most recent concepts, theories, and business models created by SMEs to gain competitive advantage over a long period of time. They enlighten other stakeholders, including MSMEs. In this research, academics acted as designers according to the pentahelix model indications. They functioned as actors who exchanged with business actors new information and new business concepts that could improve the performance of the MSMEs.

Academics are actors that often participate in policy-making, have specialized knowledge, and manifest as research organizations that contribute to policy implementation. Academics, in this case universities and research institutions, are very important for the growth of MSMEs and the creation of a knowledge- and capacity-based society. By producing the skilled workforce needed for regional economic growth, academics influence the society.

Based on the results of the interviews, academics played a role in providing space for business actors to be able to find solutions to solve their problems. For example, one of the business actors, Mrs. Isnaini, experienced problems with business capital that was running low, which hindered performance in terms of production. Mrs. Isnaini hoped to acquire a capital loan to increase her business in terms of production, business location, and other aspects so that the desired business performance could be achieved. Meanwhile, another business actor, Ms. Sunarti, experienced difficulties in marketing her products. The assistance provided by Universitas Harapan Medan through community services in the form of outreach had a positive impact on her business, enabling her to market her products online.

Various academics, in this case universities, played a role in improving the performance of MSMEs, including Universitas Sumatera Utara (USU), Universitas Islam Sumatera Utara (UISU), Universitas Muhammadiyah Sumatera Utara (UMSU), and Universitas Harapan Medan (UnHar), which had made efforts to increase the knowledge capacity of MSMEs in Medan Labuhan District. Universitas Sumatera Utara had conducted a community services activity named Independent Women's SMEs in Medan Labuhan district with good results. Independent Women's SMEs had a brand and a logo created during its training and mentoring. Then, Universitas Harapan Medan collaborated with the Medan Labuhan District government in May 2022 to solve community problems through the implementation of the Tri Dharma of Higher Education and to support the implementation of the program run by the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) named "Free Learning - Independent Campus" (MBKM). Universitas Harapan Medan as an educational institution demonstrated its commitment through the Tri Dharma of Higher Education to readily help solve the problems faced by the community, in this case the people in Medan Labuhan District, through education and teaching, research, and community services activities, as well as through the implementation of MBKM.

#### **b. Businesses**



Not only the health industry, the world economy has also been threatened with a crisis by the COVID-19 pandemic. In response to the COVID-19 pandemic, Government Regulation No. 21 of 2020 was issued which regulates social appeals intended to limit residents' activities and ensure that people stay at home. This has restricted MSMEs' operations and reduced the number of customer visits to physical shops compared to normal days. The transition of the company's financial structure to zero-based budgeting was one of the early consequences of the pandemic. Then, there was also a decrease in business productivity and profitability.

Decreased public activity will certainly slow down business performance and business growth, which will impact sales volumes. In overcoming this problem, entrepreneurs must take the right action in this situation, namely engaging in digital marketing.

Based on the results of the interviews conducted, MSME actors made preparations to enable their businesses to survive the pandemic. By utilizing the social media, the businesses could maintain their operations. It was important to keep the businesses from closing down and going bankrupt. In the pentahelix model, businesses function as enablers. Entities engaged in business are those who perform operations to add value and sustain growth. The transition to the digital era can help MSMEs improve their business performance.

MSME actors are very important for the development of business strategies. Because they control the economy through their involvement in business, these MSME actors are key players in MSME development. The main asset and main differentiator of goods sold by MSMEs is creativity. MSMEs must always improve their creativity in order to compete and meet market demands. The pentahelix approach can encourage MSME players to further develop originality, ideas, and teamwork skills through collaborations with various other stakeholders.

Stakeholders participating in the development program as MSME business actors had generally been successful in carrying out their duties in accordance with the indications of the pentahelix model. Businesses, in this case MSME actors, had performed their role well by increasing their capacity through participation in seminars held by universities and programs held by local governments to facilitate the shift of business processes to the digital era. They also made efforts to improve their business performance by innovating their products so that they could continue to generate sales in the COVID-19

pandemic situation. With assistance from banks in the form of business capital loans, MSME actors could survive the COVID-19 pandemic.

### **c. Communities**

A community is a social group in the society consisting of a number of people who are involved in certain policies. Its members usually share interests or work. A community arises from the mutual desire of its members to achieve certain goals. In order for everyone to grow together, the community members also strive to support each other.

Based on the results of the interviews, communities could play a useful role for business actors. A community helps a business promote its products. Ms. Hariani, the owner of a Malay sweets business, used the community in the business' Facebook group to promote her products. Many of the community members ordered via Facebook from within the city, from within the country, and from abroad. The existence of a community was also beneficial to Mrs. Isnaini, the business owner of Warung Miso Bu Nani, where she used a community as a forum to increase her sales. All activities carried out by her community took place in her place, bringing in profits and turnover.

A community provides a place for sharing and exchanging ideas for the progress of every business. It can also have a significant impact on a company's growth. For example, a community support network can serve as a place for members to exchange experiences and derive access to information about various business development initiatives. The results of the interviews also showed that the government's efforts to form a community in Medan Labuhan District had a positive impact on MSMEs and on the community itself.

In the pentahelix model, communities act as accelerators. In this case, communities are made up of those with thriving businesses who have similar and relevant interests. They act as intermediaries or as points of contact between parties to assist MSMEs in the entire process and accelerate the implementation of business procedures in the digital era. Communities can help MSMEs by advertising their goods and services. A community is essentially established as an MSME entity with the aim of fulfilling the needs, and actualizing the existence, of its members.

The significant contribution of MSMEs to national economic growth has prompted the government to refocus national economic policies to create a conducive business climate for MSMEs. The most significant actors in providing support and assistance to MSMEs are the government and community groups. Technology training, bank loan restructuring, assistance in procuring raw materials, social assistance, capital assistance,

counseling on the COVID-19 protocol, and business training are the support provided by the government and communities in an effort to improve the performance of MSMEs in Medan Labuhan District.

#### **d. Governments**

The government acts as a facilitator and a regulator in developing an efficient and ideal MSME. As a facilitator, the government plays an important role in assisting MSMEs in achieving their goals. If MSMEs have deficiencies related to production, the facilitator's job is to assist them in various ways, such as offering training. The task of the facilitator is to help find solutions so that MSMEs can obtain necessary and long-term capital while still observing the precautionary principle so that the MSMEs are not increasingly limited.

In addition to having the authority as a facilitator, the government also has the authority as a regulator by making policies to facilitate MSMEs in carrying out its mandate in doing their businesses. Therefore, the governments of each region, both at city and national levels, have prioritized efforts to allow MSMEs to continue to grow and support the national economy. During a pandemic like this, it can be seen as evidence that local governments are working together to support MSMEs by proposing several policies such as Regulation of the Minister of Cooperatives and Small and Medium Enterprises No. 6 of 2020 on the General Guidance to the Issuance of Government Assistance to Micro Enterprises to Support the National Economic Recovery in Facing Harmful Threats to the National Economy and in Saving the National Economy During the Corona Virus Disease 2019 (COVID-19) Pandemic to provide assistance in the form of capital for micro business actors to survive.

The government and academics, in this case the Medan Labuhan District government and Universitas Harapan Medan, established relationships by implementing and developing science and technology at Universitas Harapan Medan and allowed the community in Medan Labuhan District, precisely the Creative District, to enjoy the benefits from such relationships, providing an assistance in the form of market penetration strategies to increase operating profits from product sales for MSMEs in Medan Labuhan District. In Medan Labuhan District, there were also district and sub-district Family Welfare Empowerment Programs by which MSME products were introduced and advanced through word-of-mouth promotion. Additionally, an MSME Corner was established at the Medan Labuhan Sub-District Office where trainings related to MSMEs' products were conducted. Another form of support came from the

Medan Labuhan District Board in the form of the Medan City Government program named “One Village, One Business Center” (SAKASANWIRA). Meanwhile, to increase the capacity of the community members in Medan Labuhan District, skills trainings were carried out by related Local Apparatus Organizations (OPD) and the district government using the Sub-District Fund. These trainings included the following: 1) the Training in Brownies Making by the DP3APM (the Women’s Empowerment, Child Protection, and Community Empowerment Office), 2) the Training in Sunny-Side-Up-Shaped Pudding Making by the DP3APM, 3) the Training in Syrup Making, 4) the Training in Sausage Rolls Making by the DP3APM, 5) the Training in Fruit Salad Making by the DP3APM, 6) the Training in Making Bags from Zippers by the DP3APM, 7) the Training in Making Wallets from Waste Water Bottles, 8) the Training in Latte Art, 9) the Training in Flower Boards Making, 10) Workshops, and 11) Training in Fish Processing.

Various actions were taken by the government in its roles to improve the performance of MSMEs in Medan Labuhan District, including empowering creative communities to be productive rather than consumptive, giving awards to MSMEs, and providing infrastructure, capital assistance, and trainings for MSMEs.

#### **e. The Media**

In the pentahelix model, the media functions as an expander. The media supports publications in MSMEs’ efforts to promote themselves and build their brands. Facebook is used as a means of promotion and dissemination of information on MSME development programs that support media work. Media participation, in this case Facebook participation, in MSME development programs includes dissemination of information on MSME developments, business news, and information on the products offered along with their prices. When planning an event, the mass media is only involved in disseminating information to the public.

One of the most well-known social media platforms among MSMEs to advertise their goods is Facebook. Because customers can buy goods online by visiting their Facebook accounts, it is easier for them to make purchases online without visiting the physical stores of the MSMEs in person. By using Facebook, MSMEs can grow their businesses and promote their products. Other social media platforms, such as Twitter and Instagram, have an impact on how information about changes in SMEs is disseminated.

The business performance of MSME players will improve if the role of the media, as well as four other roles, is put to good use. The social media has an important function in the digital era because it makes it easier and faster for people to receive

information. Individual MSMEs have used the social media to develop their companies. The government also has social media accounts that can be used to convey content, carry out activities, or help MSMEs. However, this study found four MSME actors who had not implemented the social media as the main channel to promote their products. This was due to a lack of understanding of the social media.

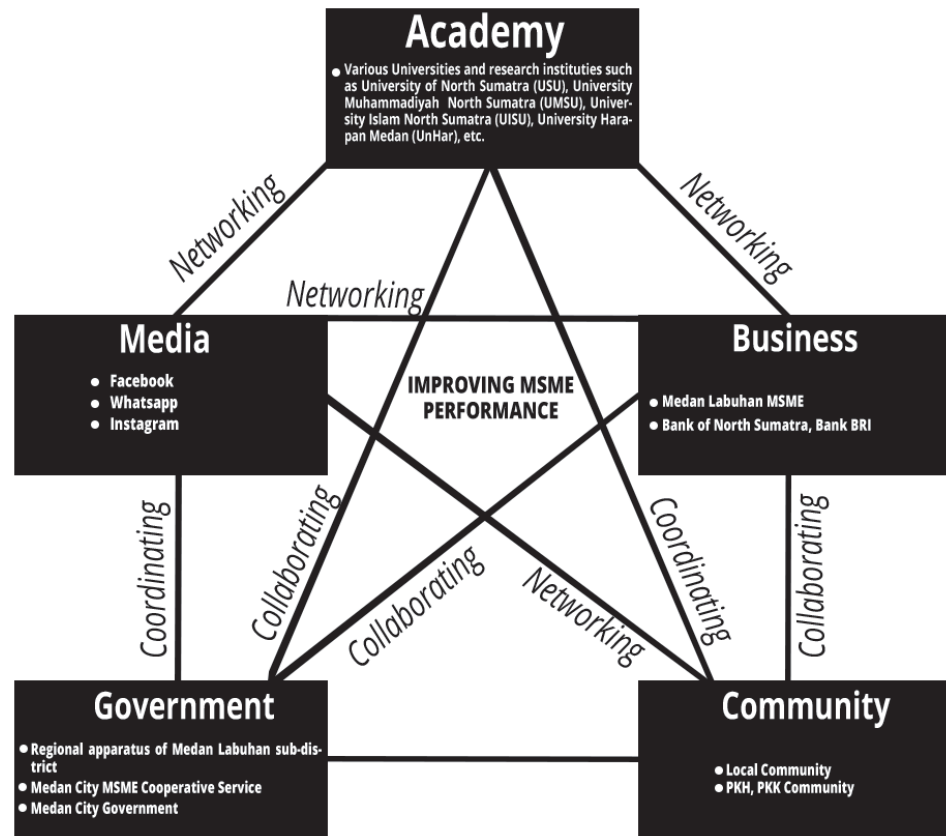


Figure 1

## 5. CONCLUSIONS & RECOMMENDATIONS

### 5.1. Conclusions

Based on the discussion above, the author drew the following conclusions:

(1) The constraints experienced by MSME players in Medan Labuhan District came from difficulties in terms of marketing, a lack of venture capital, and sales problems. These MSMEs made some changes in order to survive after the pandemic subsided. For instance, they started to utilize the social media for digital marketing, innovated their products, and adjusted the selling prices.

(2) Pentahelix business collaborations had been implemented by MSMEs in Medan Labuhan District in an effort to improve their performance after the COVID-19 pandemic.

## 6. Recommendations

(1) The advice given regarding the constraints experienced by business actors, who were informants in this study, is to actively market products through the social media, establish and maintain good relationships with customers on the social media, and improve the product quality. This advice needs to be considered by MSMEs in Medan Labuhan District.

(2) The author also suggests academics (universities), the government (Medan Labuhan Sub-District Head), and communities (the society) to help businesses (MSME actors) overcome business constraints by conducting outreach about social media because MSME actors still lacked a full understanding of the benefits of the social media.

(3) MSMEs in Medan Labuhan District are suggested to optimize business collaborations under the pentahelix model to overcome the obstacles that they are facing for recovering their conditions after the COVID-19 pandemic. Additionally, each stakeholder in the pentahelix model is suggested to strengthen synergy and focus attention on the use of the social media to help MSMEs in Medan Labuhan District market their products. Finally, banks should help MSMEs overcome capital constraints.

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