

Digital Transformation Strategy for Handicraft SMEs during the Covid-19 Pandemic in Gianyar Regency, Bali

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ABSTRAK

Salah satu tantangan terbesar bagi UMKM selama pandemi Covid-19 adalah bertransformasi ke teknologi digital. Beberapa tantangan besar tersebut antara lain yaitu, tingkat konektivitas ekosistem digital masih terbatas. Kajian ini bertujuan untuk memperdalam strategi yang dilakukan UKM kerajinan anyaman dalam beradaptasi dengan dunia digital di masa pandemi Covid-19. Transformasi digital bagi UMKM merupakan keharusan di masa pandemi saat ini, namun juga tidak terlepas dari tantangan yang mengiringinya. Para pelaku UMKM kerajinan tenun khususnya memiliki strategi yang harus menghadapi berbagai kendala. Salah satu kendala terpenting adalah sulitnya beradaptasi dengan teknologi digital, dalam hal ini pemasaran online dalam berbagai bentuk. UMKM dipaksa untuk merancang strategi untuk memasuki ekosistem digital. Artikel ini berpendapat bahwa UMKM akan diuji ketahanannya di tengah krisis untuk mengeksplorasi sumber daya mereka dan mengambil langkah-langkah inovatif. Artikel ini menjadikan pengrajin tenun di Kabupaten Gianyar sebagai subjek penelitian. Metode pengumpulan data dilakukan dengan observasi dan wawancara mendalam. Klasifikasi dan analisis data dilakukan dengan menggunakan prinsip metode kualitatif.

ABSTRACT

One of the biggest challenges for MSMEs during the Covid-19 pandemic is to transform to digital technology. Some of the big challenges include: first, the level of digital ecosystem connectivity is still limited. This study aims to deepen the strategies carried out by woven handicraft SMEs in adapting to the digital world during the Covid-19 pandemic. Digital transformation for MSMEs is a necessity during the current pandemic, but it is also inseparable from the challenges that accompany it. The weaving handicraft UMKM players in particular have a strategy that must face various obstacles. One of the most important obstacles is the difficulty of adapting to digital technology, in this case online marketing in various forms. MSMEs are forced to design strategies to enter the digital ecosystem. This article argues that MSMEs will be tested for resilience in the midst of a crisis in order to exploit their resources and take innovative steps. This article makes the weaving craftsmen in Gianyar Regency the subject of research. The method of data collection is done by observation and in-depth interviews. Data classification and analysis were carried out using the principles of qualitative methods.

1. INTRODUCTION

One of the biggest challenges for MSMEs during the Covid-19 pandemic is to transform to digital technology. Some of the big challenges include: first, the level of digital ecosystem connectivity is still limited (Aarikka-Stenroos & Ritala, 2017; Etzkowitz et al., 2008). The latest data from the Ministry of Cooperatives and MSMEs shows that currently MSMEs are connected to the digital ecosystem only about 13% or around 8 million business actors (Audretsch & Belitski, 2017). Second, being connected to the digital ecosystem does not automatically make business actors successful. After the MSMEs are connected to the digital ecosystem, they must compete with existing digital business actors. At this point, not all MSMEs have the ability to compete and have a digital ecosystem (Sondari, 2014). Third, one of the characteristics of a business in the digital market is that it needs a fast and reliable response. Indonesian MSMEs, which are thick with informality and relatively unfamiliar with modern management, stutter to face the characteristics of this market (Malecki, 2011). Fourth, limited digital literacy. The knowledge and skills of informal sector businesses to use digital media, communication tools and available networks by

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finding, evaluating, and creating and using information related to the business they are engaged in are still very limited. One example of the need to master digital literacy is related to sales materials (Jennen et al., 2016; Jurado & Battisti, 2019).

In contrast to businesses that are run in a conventional way, doing business using a digital platform requires a product catalogue to make it easier for consumers to find (Jurado & Battisti, 2019; Krueger & Carsrud, 1993). Of course, product catalogues cannot be made haphazardly, because in a digital-based business, consumers are very easy to skip. Catalogues are made according to category, size, colour, and even product stock that is still available. That way, regardless of the search form, consumers will find the best answers in our product catalogue. Fifth, in addition to digital literacy, MSME literacy on aspects of financial management is also still an issue that must be resolved, especially in the context of response to a crisis situation. This is very relevant because the latest study shows that financial literacy is proven to have a positive influence on the business performance of MSMEs. Financial management creativity is required by business actors in situations of limited financial resources and uncertainty of business cash flows (Henrekson & Sanandaji, 2014; Mirzanti et al., 2015).

The process of adaptation and strengthening resilience has a double meaning for MSMEs. In the short term, this process is expected to be able to minimize the failure rate of MSME actors during the pandemic period, while the long-term impact of the sustainable adaptation process can bring MSMEs to be more competitive, independent, resilient, and become major players in the national economic structure (Reymen et al., 2017; Sarasvathy & Dew, 2005). With a supporting infrastructure, MSMEs with digital literacy that are quite competitive enter digital markets that cross borders and across time. Furthermore, MSMEs will be more independent because they grow and are rooted in social connections and more resilient because they are ready, accustomed and flexible to respond to change through emergent strategies.

Therefore, entrepreneurship plays a very important role in promoting the sources of resilience through their attitudes and behaviour (Spigel & Harrison, 2018; Wanita, 2015). A thick culture of informality and a simple organizational governance structure in informal sector businesses allows emergent strategies to be implemented. Business processes and decisions run spontaneously and develop from time to time, do not require formal planning, as a form of response to changes in environmental situations. At the same time, access to social capital needs to be maintained and includes building trust and empowerment with employees and stakeholders so as to create social embeddedness on the one hand, and adaptive capacity on the other. It is hoped that the above sources of individual resilience can be internalized in the work culture of the organization and adopted by employees so that the business being run is more resilient to external pressures (Sondari, 2014; Stam & Spigel, 2016).

2. METHODS

The qualitative method is used in this article by conducting in-depth observations and interviews with weaving SMEs craftsmen in Gianyar Regency. One of the interviewees was Ida Bagus Adnyana of Putri Ayu weaving in Blahbatuh, Gianyar Regency. Interviews were also conducted with the weaving craftsmen at the weaving location. All in-depth interview data and observations were then classified and analyzed to build arguments related to the SMEs strategy of weaving crafts to transform into digital formats in running their business. The observation method is one way of collecting research data on SMWEs business actors. This method can be observed directly associated with the phenomena that exist at the research location and the required data. In simple terms, observation is the process of researchers in looking at the research situation. Tools used in observations are observation sheets, checklists, event records, and others. In this case, the researcher directly visited the SMWEs, which was determined through the sample criteria to distribute the questionnaire. The results of this observation become a source of data for researchers to obtain data in taking research samples. Through searches conducted regarding research samples, there were 43 SMWEs primarily managed by women. The questionnaire's preparation uses vital indicators built from relevant theories and then compiles a closed questionnaire in the form of structured questions for each variable. Then the results of the data will be analyzed to be used as a reference in research. We collect data using a Questionnaire for Small and Medium Enterprises to see how SMWEs views their interest in E-Commerce services. The questionnaires were distributed directly to the field by complying with the Covid-19 health protocol. In calculating the questionnaire, the researcher used a 5-point Likert scale. We conducted a literature study by collecting data and theories relevant to the problems, including relevant articles, journals, books, and previous research.

3. RESULTS AND DISCUSSIONS

Results

Characteristics of respondents

The pandemic came to surprise us all, destroying work structures and patterns, revising social relations, and tearing up the normal life patterns of the past. The changes that occurred during the Covid-19 pandemic were fundamental and permanent, permeating to the bottom of the structure of society. Health, economy, education, transportation, tourism, and logistics are just a few examples of sectors experiencing disruption. Likewise, the management of MSMEs is constantly changing. Adaptation is the only answer so that the probability of survival is maintained. Adaptation can also be a momentum to reorganize ways of managing MSMEs to be more resilient, which is characterized by the integration of health protocols in business decisions, adoption of digital transformation, strengthening social capital, and continuous innovation in business models. Efforts to develop adaptation to a new normal present both opportunities and challenges.

Persistence in managing and finding solutions to existing challenges is the basis for strengthening MSME resilience, while intelligence in capturing and exploiting opportunities is another dimension to encourage resilience and accelerate business in the pandemic era. For MSME actors who can read and adapt to changes in consumer behavior and purchasing patterns, several opportunities can be exploited. Some of the opportunities for MSME actors include: first, entering the digital ecosystem. The digital ecosystem offers a wider marketing reach for pre MSMEs. Not only easy access, across time, and across locations, ecosystems. Second, the extensification of modes and digital technology. At the moment, companies that are starting to digitally transform may still focus on the sales aspect. However, in the future, the scope of digital transformation can be expanded to other business aspects, such as the use of digital order processing to increase the efficiency of the production process through automation, the adoption of machine learning, and artificial intelligence to optimize supply chain performance, and the use of big data and artificial intelligence to optimize customer experiences.

Third, enter the business sectors that provide positive business prospects. Not all business sectors receive the negative impact of the pandemic. Several business sectors, such as the production of medical equipment (masks, PPE, face shields), the production of immune-supporting materials (honey, health supplements, herbs, etc.), processed food products, and agricultural products actually have more growth opportunities. Big in this pandemic era. MSME actors must of course be proactive and responsive to take advantage of these opportunities, so that they can navigate the business they run so they don't sink into the crisis puddle. Fourth, rebuild cooperatives as pillars of the national economy. Efforts to realize the new normal implies the congruence of economic affairs, health affairs, and the benefit of society. This spirit is very relevant to the spirit of cooperative associations that present mutual benefits between members based on common interests. Movements that rely on reviving social connectivity will play a more powerful role when orchestrated in a modern and professional cooperative entrepreneurship forum. Cooperative entrepreneurship can be realized through three main pillars, namely: the entrepreneurial attitude of members and management, a strong desire and real effort to initiate and produce new products and services, and a serious effort to complement each other's weaknesses and strengths between members, both in terms of capabilities, resources, products, markets, and technology.

In addition to the opportunities described above, the challenges faced are no less severe. These challenges include: first, the level of connectivity of the digital ecosystem is still limited. The latest data from the Ministry of Cooperatives and MSMEs shows that currently MSMEs are connected to the digital ecosystem only about 13% or around 8 million business actors. Second, being connected to the digital ecosystem does not automatically make business actors successful. After the MSMEs are connected to the digital ecosystem, they must compete with existing digital business actors. At this point, not all MSMEs have the ability to compete and have a digital ecosystem. Third, one of the characteristics of a business in the digital market is that it needs a fast and reliable response. Indonesian MSMEs, which are thick with informality and relatively unfamiliar with modern management, stutter to face the characteristics of this market. Fourth, limited digital literacy. The knowledge and skills of informal sector businesses to use digital media, communication tools and available networks by finding, evaluating, and creating and using information related to the business they are engaged in are still very limited. One example of the need to master digital literacy is related to sales materials. In contrast to businesses that are run in a conventional way, doing business using a digital platform requires a product catalog to make it easier for consumers to find. Of course, product catalogs cannot be made haphazardly, because in a digital-based business, consumers are very easy to skip. Catalogs are made according to category, size, color, and even product stock that is still available. That way, regardless of the search form, consumers will find the best answers in our product catalog. Fifth, in addition to digital literacy, MSME literacy in financial management aspects is also still an issue that must be resolved, especially in the context of responding to a crisis situation. This

is very relevant because the latest study shows that financial literacy is proven to have a positive influence on the business performance of MSMEs. Financial management creativity is needed by business actors in situations of limited financial resources and uncertainty of business cash flows.

An ecosystem is the unification of different industrial entities into a new organization. This new organization offers something different than before, which the company or industry sector would not be able to do alone. By shaping the ecosystem, market participants have the ability to fulfill what customers want most. Because, what often happens is that companies do not fully understand the needs of their customers. Because of that, now traditional companies are starting to realize how to change their business models so they don't go bankrupt. Another perspective reveals that an ecosystem can be defined as "a living community that relates to various non-living components in the environment, interacting as a system". From the above understanding, it can be defined that the "entrepreneurial ecosystem" is the union of various components, be it HR (Human Resources), facilities, regulations and various other things in forming an entrepreneurial culture. Business models are constantly changing and evolving. If post-World War until 1980 the business model was a conglomeration with cross-industry operations, then in the 1980s until now, companies have become specialists that only focus on one industry. In the future, with the increasing collaboration ecosystem, the boundaries of the industrial sector will become blurred. Traditional companies will be more agile because they can adapt their information technology infrastructure to suit the company's operational needs.

Discussion

Business resilience is a form of business unit capacity—in this case, MSMEs—to bounce back from difficulties and failures. Businesses that have high resilience can be seen from three important characteristics, namely: first, MSMEs that can guarantee the sustainability of their business even though they are hit by waves of uncertainty, both from internal and external sources. Second, MSMEs deal with uncertainty by using survival capital (Mirzanti et al., 2015; Olugbola, 2017). The product and the scope of business have not changed even though the income barely covers the expenses. In survival capital, business focus is directed to minimize losses that occur. MSMEs with high resilience can get through this difficult period and move into growth mode as soon as possible. The third characteristic is that MSMEs are able to re-orient and renew their business (Malecki, 2011; Mason & Brown, 2014). In the face of uncertainty, MSMEs sometimes need to take revolutionary steps by changing the direction of their business, modifying their business model and conducting business renewal. Target consumers may need to be changed, supply chain configurations need to be modified, distribution channels need to be rearranged, communication strategies need to be reorganized, cost structures need to be dismantled, and of course production systems and processes need to be adapted to the characteristics of the current business environment.

The characteristics of MSMEs naturally do not present resilience in business. The resources owned by MSMEs are usually limited. The capital used is relatively small, access to external funding is very limited, the technology used is simple, and the composition and competence of human resources is also relatively low (Krueger & Carsrud, 1993). This puts MSMEs in a position that is vulnerable to the risk of external pressures. Although MSMEs are very vulnerable and do not have adequate social capital for their survival in times of crisis, the role of MSME owners in driving their entrepreneurship is very central. MSME owners will usually double as managers who play a vital role in the survival of MSMEs in times of crisis. The entrepreneur's vision from the owner will usually be the center of authority and decision making. The owner-manager is in charge of almost all strategic and daily operational decisions. Existing personnel only act as assistants, receiving instructions and usually have very little initiative. In the context of MSMEs, the development and adaptation of business resilience is reflected in the attitudes, behavior, and activities of the owner-manager (Jennen et al., 2016; Jurado & Battisti, 2019).

The resilience of MSMEs is largely determined by the entrepreneurial attitude of the MSME actors themselves. Positive attitude towards risk, accustomed to and excelling in the face of ambiguity, staying positive when facing difficulties, seeing crises as opportunities to renew the business, proactively taking initiatives, and trained in identifying opportunities that were not previously exploited. These attitudes show the existence of entrepreneurial resilience and this is the basis for creating business resilience in the context of MSMEs which tends to be relational, contextual, and behavioral rather than structural and resource intensive (Isenberg, 2011; Jacobides et al., 2006). The adaptation and combination of the digital media portfolio used is certainly closely related to the type of product, consumer targets, and digital literacy owned by MSME actors. The growth of the e-commerce market is very promising, not only because of the social restriction policies imposed by the government during this pandemic. Trading with digital modes promises benefits not only for producers but also for consumers. The market mechanism becomes more transparent. Consumers can easily make comparisons of products and services, features,

and prices, without having to move from their seats. Consumer satisfaction is also more transparent because of the rating mechanism (Aarikka-Stenroos & Ritala, 2017; Acs et al., 2017).

The third important point is to redefine and exploit social capital. Crisis conditions provide valuable lessons on the importance of social connections (Etzkowitz et al., 2008; Etzkowitz & Klofsten, 2005). Crisis cannot be overcome if everyone works individually. Social connection is understood as a source of resilience at the individual level. The existence of social connections allows individuals to have informal support mechanisms. Resilience can be generated from the social embeddedness of MSME actors in business and from the social support provided by employees and other stakeholders. Social connections not only offer benefits to help run business processes and carry out business development, but are also proven to be able to provide backup resources when a crisis strikes (Al-Abri et al., 2018; Carayannis & Campbell, 2010). The fourth important thing is to hone the readiness to reorient the business and change the business model. The Covid-19 pandemic has disrupted market structure, consumer behavior and business governance. Running a business with the business as usual mode is certainly not compatible in a pandemic situation like today (Audretsch & Belitski, 2017; Chandler et al., 2011).

There are several strategic options that MSMEs can take in responding to the disruption caused by this pandemic. Among them are: first, exploit requests. During the pandemic, the demand for food from food businesses such as Gudeg, noodles, dumplings, etc. is still high, but buyers don't dare to buy with eating mode in places like they did before the pandemic. SMEs engaged in the food sector can exploit this demand by serving these foods frozen or in cans (Conrad & Cassar, 2014; Etzkowitz & Leydesdorff, 1995). The second thing, expand resources. Seeing the trend of changing consumption patterns and the increasing demand for frozen and canned packaged food, several food businesses have started to adopt canned packaging technology and the use of frozen food to expand their business scope. The third point, acquire new capabilities. This strategy is mostly done by fashion businesses. They responded to the low demand for clothing products by building their capabilities and capabilities to produce personal protective equipment. Production capacity and unemployed employees to make fashion products are encouraged to learn new skills in producing PPE, so that in the future there will be opportunities to serve new segments. Fourth, scaling-up is the most aggressive strategy choice. This strategy encourages accelerated business growth to take advantage of existing opportunities.

4. CONCLUSION

The digital transformation strategy of weaving SMEs in this pandemic period is a necessity. Therefore, the only way is to adopt digital transformation. To respond to changes in people's behaviour due to physical and social restrictions, SMEs in weaving craft need to migrate from offline-based businesses to online-based channels. Electronic commerce (e-commerce) is a necessity for business actors during this pandemic and also in the future. The variety of choices stretches from digital technology that can be used by MSME actors. At this moment, it is very necessary for the survival efforts of SMEs in weaving craft to create a gradual and long-term strategy for the sustainability of their business.

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6. REFERENCES

- Aarikka-Stenroos, L., & Ritala, P. (2017). Network management in the era of ecosystems: Systematic review and management framework. *Industrial Marketing Management*, 67, 23–36. <https://doi.org/10.1016/j.indmarman.2017.08.010>.
- Acs, Z. J., Stam, E., Audretsch, D. B., & O'Connor, A. (2017). The lineages of the entrepreneurial ecosystem approach. *Small Business Economics*, 49(1), 1–10. <https://doi.org/10.1007/s11187-017-9864-8>.
- Al-Abri, M. Y., Rahim, A. A., & Hussain, N. H. (2018). Entrepreneurial ecosystem: An exploration of the entrepreneurship model for SMEs in Sultanate of Oman. *Mediterranean Journal of Social Sciences*, 9(6), 193–193. <https://www.richtmann.org/journal/index.php/mjss/article/view/10344>.
- Audretsch, D. B., & Belitski, M. (2017). Entrepreneurial ecosystems in cities: establishing the framework conditions. *The Journal of Technology Transfer*, 42(5), 1030–1051. <https://doi.org/10.1007/s10961-016-9473-8>.
- Carayannis, E. G., & Campbell, D. F. J. (2010). Triple Helix, Quadruple Helix and Quintuple Helix and How Do Knowledge, Innovation and the Environment Relate To Each Other? *International Journal of*

- Social Ecology and Sustainable Development*, 1(1), 41–69. <https://doi.org/10.4018/jesed.2010010105>.
- Chandler, G. N., DeTienne, D. R., McKelvie, A., & Mumford, T. V. (2011). Causation and effectuation processes: A validation study. *Journal of Business Venturing*, 26(3), 375–390. <https://doi.org/10.1016/j.jbusvent.2009.10.006>.
- Conrad, E., & Cassar, L. F. (2014). Decoupling economic growth and environmental degradation: reviewing progress to date in the small island state of Malta. *Sustainability*, 6(10), 6729–6750. <https://www.mdpi.com/81528>.
- Etzkowitz, H., & Klofsten, M. (2005). The innovating region: toward a theory of knowledge-based regional development. *R&D Management*, 35(3), 243–255. <https://doi.org/10.1111/j.1467-9310.2005.00387.x>.
- Etzkowitz, H., & Leydesdorff, L. (1995). The Triple Helix--University-industry-government relations: A laboratory for knowledge based economic development. *EASST Review*, 14(1), 14–19. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2480085.
- Etzkowitz, H., Ranga, M., Benner, M., Guarany, L., Maculan, A. M., & Kneller, R. (2008). Pathways to the entrepreneurial university: towards a global convergence. *Science and Public Policy*, 35(9), 681–695. <https://academic.oup.com/spp/article-abstract/35/9/681/1673248>.
- Henrekson, M., & Sanandaji, T. (2014). Small business activity does not measure entrepreneurship. *Proceedings of the National Academy of Sciences*, 111(5), 1760–1765. <https://www.pnas.org/content/111/5/1760.short>.
- Isenberg, D. (2011). *The Entrepreneurship Ecosystems Strategy as a New Paradigm of Economics Policy: Principle for Cultivating Entrepreneurship*. Babson Global.
- Jacobides, M. G., Knudsen, T., & Augier, M. (2006). Benefiting from innovation: Value creation, value appropriation and the role of industry architectures. *Research Policy*, 35(8), 1200–1221. <https://doi.org/10.1016/j.respol.2006.09.005>.
- Jennen, T., Rigby, C., & Allum, J. (2016). Stakeholder Engagement in the creation of an entrepreneurial ecosystem. *Journal of Asia Entrepreneurship and Sustainability*, 12(1), 3. <https://www.proquest.com/openview/8c4940e540007867f0848023c8d7fc13/1>.
- Jurado, T., & Battisti, M. (2019). The evolution of SME policy: the case of New Zealand. *Regional Studies, Regional Science*, 6(1), 32–54. <https://doi.org/10.1080/21681376.2018.1562368>.
- Krueger, N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, 5(4), 315–330. <https://doi.org/10.1080/08985629300000020>.
- Malecki, E. J. (2011). Connecting local entrepreneurial ecosystems to global innovation networks: open innovation, double networks and knowledge integration. *International Journal of Entrepreneurship and Innovation Management*, 14(1), 36–59. <https://doi.org/10.1504/IJEIM.2011.040821>.
- Mason, C., & Brown, R. (2014). *Entrepreneurial Ecosystem and Growth Oriented*. OECD.
- Mirzanti, I. R., Simatupang, T. M., & Larso, D. (2015). Entrepreneurship policy implementation model in Indonesia. *International Journal of Entrepreneurship and Small Business*, 26(4), 399–415. <https://doi.org/10.1504/IJESB.2015.072765>.
- Olugbola, S. A. (2017). Exploring entrepreneurial readiness of youth and startup success components: Entrepreneurship training as a moderator. *Journal of Innovation & Knowledge*, 2(3), 155–171. <https://doi.org/10.1016/j.jik.2016.12.004>.
- Reymen, I., Berends, H., Oudehand, R., & Stultiëns, R. (2017). Decision making for business model development: a process study of effectuation and causation in new technology-based ventures. *R&D Management*, 47(4), 595–606. <https://doi.org/10.1111/radm.12249>.
- Sarasvathy, S. D., & Dew, N. (2005). New market creation through transformation. *Journal of Evolutionary Economics*, 15(5), 533–565. <https://doi.org/10.1007/s00191-005-0264-x>.
- Sondari, M. C. (2014). Is entrepreneurship education really needed?: Examining the antecedent of entrepreneurial career intention. *Procedia-Social and Behavioral Sciences*, 115, 44–53. <https://doi.org/10.1016/j.sbspro.2014.02.414>.
- Spigel, B., & Harrison, R. (2018). Toward a process theory of entrepreneurial ecosystems. *Strategic Entrepreneurship Journal*, 12(1), 151–168. <https://doi.org/10.1002/sej.1268>.
- Stam, F. C., & Spigel, B. (2016). Entrepreneurial ecosystems. *USE Discussion Paper Series*, 16(13). <https://dspace.library.uu.nl/handle/1874/347982>.
- Wanita, N. (2015). Perkembangan Usaha Mikro, Kecil dan Menengah (UMKM) di Pasar Manonda Palu. *Istiqla: Jurnal Hasil Penelitian*, 3(2), 250–279. <https://jurnal.iainpalu.ac.id/index.php/ist/article/download/220/147>.