

# Tiered Small Medium Enterprise Training Model: Achieving SME's Competitive Advantage in Industrial Revolution 4.0 Era

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**ABSTRACT:** This study aims to analyze the model and implementation of tiered SME training in achieving SME's competitive advantage in the industrial revolution 4.0 era. The type of research used was qualitative research through focus group discussion, in-depth interviews, and observation methods. The results of the current study are (1) The Surabaya City Government initiated tiered SME training and developed by academics to facilitate the readiness of SME actors by involving trainers in increasing the competency of SME actors in order to achieve competitive advantage in industrial revolution 4.0 era; (2) Challenges faced by SMEs in the industrial revolution 4.0 era are increasingly severe, so that they require commitment, the ability to adapt to change, and a strong willingness to learn; (3) Commitment, the ability to adapt to change, and the willingness to learn SME actors have heterogeneity.

*Keywords:* Competitive advantage, commitment, ability to adapt, tiered SME training.

## 1 INTRODUCTION

Since 2011, countries worldwide, including Indonesia, have been touted the industrial revolution 4.0 era, also in Indonesia. Moreover, the Indonesian government also wants to pursue its vision of becoming the top 10 of the world economy in 2030, so the Indonesian government also focuses on developing strategies to have competitive advantages in the industrial revolution 4.0 era (Pratono et al., 2019)

SMEs are the mainstay of the Indonesian government to achieve its vision. SMEs are the backbone of most national strategic economic sectors, as well as the lives of many people. In addition, the largest economy in Indonesia is SMEs. SMEs have also been proven to be a security key in Indonesia during the economic crisis and also contributed a dynamic growth in Indonesia in the aftermath of the crisis (Darmasetiawan, 2019).

SMEs are productive businesses owned by individuals and/or business entities that meet the criteria of micro-businesses according to the rule. According to the rule, Small-scale business is a productive economic business that is established by itself, carried out by individuals or business entities that are not subsidiaries or not branches that are owned, controlled, or a direct or indirect part of a large business. Medium-scale business is a commercial business that is established by itself, carried out by individuals or business entities that are not subsidiaries or branches owned, controlled, or a direct or indi

rect part of small or large businesses with a net amount or annual sales as regulated in the Indonesian Act (Darmasetiawan, 2019).

In 2000-2003, the role of MSMEs in boosting value-added grew from 54.51% in 2000 to 56.72% in 2003. On the contrary, large enterprise roles decreased from 45.49% in 2000 to 43.28% in 2003. MSMEs also constituted basic needs and services at 43.8%, while large enterprises constituted 42.1%, and imports amounted to 14.1% (Darmasetiawan, 2019).

In 2003, the economic growth of micro and small enterprises reached 4.1%, medium enterprises reached 5.1%, while large enterprises were only 3.5%. The growth of MSMEs has contributed to 2.37% of Indonesia's total economic growth of 4.1%. In the period 2001-2003, MSMEs have the advantage of encouraging GDP growth in the secondary sector, which grew by 5.60%, 4.65% and 5.36% respectively, while large enterprises only grew by 3.36%, 3.60% and 4.04% in the same period. Thus, MSMEs in the secondary and tertiary sectors are very potential to be developed considering their high growth. In general, the MSMEs' contribution to GDP has increased compared to before the crisis, along with the decline of medium and large businesses. Six years after the crisis, the condition of medium-sized enterprises has not yet recovered, while large businesses have only just begun to recover in 2003. Comparison of financial positions in 1997 and 2003 illustrates that the economic crisis

has a high impact on medium and large businesses. The national economy only recovered from the crisis conditions at the end of 2003, where the role of medium-sized businesses was diminishing, but slowly began to rise again. Micro and small enterprises were relatively quick to recover from the economic crisis and had made the most substantial contribution to the national economy, especially during the peak of the 1998 and 1999 crises, even though they were later displaced by large businesses (Darmasetiawan, 2019).

The strategy that can be carried out by the Indonesian government in order to enable MSMEs to compete in the industrial revolution 4.0 era is a technology-based economic strategy. In this industrial revolution 4.0, it is hoped that MSMEs will no longer focus on traditional manufacturing meaning as they must be able to apply digital technology, because the industrial revolution 4.0 will be marked by increased connectivity, interaction, and collaboration between people and between organizations (Niu, 2009; Darmasetiawan, 2018), as well as machines and other resources will be increasingly converging through information and communication technology. The industrial revolution 4.0 era became a big leap for the industrial sector where information and communication technology was utilized to the full. Not only in the production process, but this technology is also utilized throughout the industrial value chain so as to give birth to a new business model with a digital basis in order to achieve high efficiency and better product quality.

To improve the competence of the MSMEs actors, an MSME training model was developed. The tiered entrepreneurship training was conducted in three levels, namely the basic level for new micro-entrepreneurs, middle level for micro-entrepreneurs who have been running their business but need improvement on various aspects of business, such as packaging improvement, more equipment using appropriate technology, and others, while the advanced level of training for micro-entrepreneurs who will further develop their business in quality and order to have a more significant turnover and market share (Darmasetiawan, 2018). The research questions proposed in this research are: (1) How can the tiered SME training achieve SME's competitive advantage in the industrial revolution 4.0 era?; (2) Why are tiered SME training in achieving SME's competitive advantage in the industrial revolution 4.0 era demanding commitment, ability to adapt to change, and a strong willingness to learn by participants of tiered SME training?; (3) What are the commitments, the ability to adapt to change, and the willingness to learn of SME actors?.

## 2 RESEARCH METHODS

The research was qualitative descriptive research, where the researcher knows the position at the time of data collection in the field, and become the data interpreter (Moleong, 2011).

The sampling technique used in this research was purposive sampling that is a sampling technique from data sources with a particular consideration. (Sugiyono, 2013).

Data collection techniques used were in-depth interviews, the researchers looking for data by in-depth interview with all the relevant informants consisting of BAPEKO Surabaya, which proposes the concept and evaluates the development of the Tiered MSME training model, the Surabaya City Cooperative and MSME Office, MSME practitioners in Surabaya, MSME actors in "Kampung Salak" Wedi Village, which are related to salak (snake fruit) sellers, and business actors in agro fields, and processed products. The number of informants was 8 people. In-depth interviews were conducted and equipped with observations, namely data collection techniques, by observing the attitude of research subjects.

Data analysis techniques used (1) data reduction, data collected from the field in the form of an in-depth interview, and observation results were then recorded in detail and thorough, summarized, selected vital points emphasized on the things that are important, and sought the theme and the pattern. Afterward, (2) data was displayed after the data was reduced, and the next step was to perform the presentation of data. The presentation was done in the form of a brief description, making the chart, the relationship between categories, flowchart where in this study used narrative text. The final step was (3) conclusion drawing/ verification is the withdrawal of conclusions and verification (according to Miles and Huberman in Sugiyono, 2013).

## 3 RESULTS AND DISCUSSIONS

The tiered SME training model is expected to achieve SME's competitive advantage in the industrial revolution 4.0 era. The tiered entrepreneurship training was conducted in three levels, namely the basic level for new micro-entrepreneurs, middle level for micro-entrepreneurs who have been running their business but need improvement on various aspects of business, such as packaging improvement, more equipment using appropriate technology, and others, while the advanced level of training for micro-entrepreneurs who will further develop their business in quality and order to have a more signifi-

cant turnover and market share (Darmasetiawan, 2018).

The tiered MSME training model, developed by the Surabaya City Government, was initially designed to increase community empowerment through cross-SKPD collaboration. The scheme begins with providing productive business training such as training in handicraft making, sewing, cake making, and various businesses with responsible SKPDs are Bapemas and KB, the Manpower Office, and the Office of Food Security. In the next stage, trainees who have received training are directed to form new micro business communities, guided by the Cooperative and SME Office and the Health Office. These communities will then be directed towards the establishment of a superior business village with SKPD in charge of the Trade and Industry Office, the Cooperative and SME Office, and the Health Office.

At present, the implementation of the tiered SME training is not only in the City of Surabaya but also in Bojonegoro Regency. The main target of this tiered SME training is to create business competitiveness that can make SME entrepreneurs have increasingly competitive advantages, especially in facing the industrial revolution 4.0, which is marked by increased knowledge sharing, mindset changers, engagement, collaborative culture, superb leadership, HR competency, and digitalization.

The challenges faced by SMEs in the industrial revolution 4.0 era are increasingly severe, so that they require commitment, the ability to adapt to change, and a strong willingness to learn, because the changes also alter demands, both against business actors and to all entities.

The results of the evaluation of the implementation of the tiered SME Training in the City of Surabaya, showed that the challenges faced by the SMEs of Surabaya City are getting heavier, especially in the readiness of SMEs to utilize the digital world optimally, because most SME players who take the tiered training still focus on traditional manufacturing, even though collaborative interaction among individual has been going well, such as sharing work equipment. This is in accordance with the increased in connectivity and interaction among people, machines, and resources, but not to a broader interaction, and there is no confidence to interact between organizations, which is marked by the expression of the SMEs that are able to produce but not to do marketing, although some large industries such as Tokopedia, Bukalapak, Shope, Traveloka, Gopay, Ovo, and others have facilitated broader interactions among people, organizations, machines, and resources more convergently through information and communication technology.

This shows that the function of the tiered SME training must increasingly lead to how to

accommodate the SME actors to be able to make a big leap for the industrial sector, maximize the utilization of information and communication technology, not only in the production process, but also the use of technology in the entire industrial value chain which can give birth to a new business model on a digital basis to achieve high efficiency and better product quality. According to McKinsey (2019), the demand for change above is due to the industrial revolution 4.0 as this era was marked by (1) increasing data volume, computational capacity, and connectivity; (2) the emergence of analytic capabilities and business intelligence; (3) new interactions between machines and humans such as augmented reality systems and interfaces; and (4) Improvements in the transfer of digital instructions to the physical world such as 3D printers.

Commitment, ability to adapt to change, and the willingness to learn MSME actors have heterogeneity. MSMEs from Surabaya city who received tiered training with the business canvas model were mostly from culinary businesses (food and beverages, including pastries, wet cakes, packaged drinks, catering, and snacks), fashion and accessories business (clothes, batik, cloth, bags, sandals, shoes, accessories such as embroidery applications, hijab / veil), art, craft, and souvenirs (production of handicrafts, souvenirs, dolls), services (photography services, educational institutions, tours and travel, laundry, salons, delivery, tailors, makeup, and decoration).

Commitment to learning from the Surabaya MSMEs is still lacking, many of the MSMEs participating in the training are not in the context of awareness wanting to increase competencies and learning, but only as an effort to increase income when the business is quiet, so that if the business is busy, the MSME business actors will not attend the training.

In addition, the mindsets of MSME actors are still the same. The MSMEs consider that as penetrating the domestic market is still difficult, so why do they need to penetrate the global market. Many also assume that the largest market of MSMEs is the domestic market, so there is no need to penetrate the global market. Furthermore, there are still many MSMEs that depend on imported raw materials, for example MSMEs that produce "tempe" (soybean cake), still rely on imported soybeans from the USA and feel that raw materials from Indonesia make "tempe" less good whereby they also assume consumers prefer imported materials as the materials can produce better quality of tempe.

The MSMEs feel welcome to the progress and development of technology. From the results of interviews conducted on the snake-fruit MSME actors in the Village of Wedi Village, Kapas Sub District, Bojonegoro District, almost all of them already have android mobile phone, able to use the internet and

WhatsApp, join the WhatsApp group for the snake-fruit MSME actors in the Village of Wedi Village, Kapas Sub District, Bojonegoro District, have used several marketplaces, such as Tokopedia, Shopee, Bukalapak, Lazada, and so on, and some have even opened online stores. The snake-fruit MSME actors SME actors in the Village of Wedi Village, Kapas Sub District, Bojonegoro District are enthusiastic and have a strong will to learn something new.

In addition, the people of Wedi Village are very progress-oriented and not just committed to developing their villages, but have reached an engagement level. So that in a short time there have been various changes in the Wedi Village community (Darmasetiawan et al. 2019)

Wedi Village community is very easy to be invited to participate in. Business actors possess trust in each other. For example, there is a woman named Ms. Arum, who is the pioneer of the most successful MSME in the village of Wedi in producing processed salak (snake-fruit) products, with one of its flagship products is salak palm fruit snacks. This MSME has the highest sales turnover. At certain times, for example, before Idul Fitri, the MSME was unable to meet the abundant demand, so it is necessary to get supplies from other business actors. The successful businesswoman does not hesitate to share her knowledge so that other business actors are able to imitate the way of making snake-fruit products in order to be able to support the need for snake-fruit products. The trust that is owned by the people of the Wedi Village is because the community feels they have the same attachment, the same goals, the existence of social norms which are control of one another not to compete with each other, and the desire to grow together in a better life (Darmasetiawan et al. 2019).

Wedi Village community members are bound to collaborate and share knowledge (Darmasetiawan et al. 2019). This thing also happens to industrial clusters in a very famous Silicon Valley area in the United States. The industrial cluster deals with the attachment among businesses in a geographical location, which can be due to the location having a comparative advantage (Dunning, 1988).

Collaboration strategies in the agro-tourism of Kampung Salak Bojonegoro are carried out by helping one another, such as large businesses that will help small businesses. In Wedi Village, there is Toyoaji, where Toyoaji managers feel they are part of the Wedi Village community, so they have a strong desire to share (Niu, 2008, Niu, 2009), the desire to share is due to the trust held by one another (Darmasetiawan et al. 2013). The collaboration was implemented in the community and empowered by the manager of Toyoaji. It established Toyoaji as the center of Dolanan Nusantara (Nusantara Playground). Toyoaji cooperated with the people of Wedi Village, provided space for educational tour-

ism of processed salak products, made tour packages for Toyoaji guests in the form of tours to salak gardens, and the center of souvenirs in Salak Wedi Village, resulting in a symbiosis of mutualism. On the other hand, Wedi village people who are enthusiastic about becoming MSMEs are also given training for online marketing, hoping after the processed salak products produced by the famous Wedi village community, customers are willing to know and finally visit Salak Wedi Village.

In this industrial revolution 4.0, quality is also the main factor so that a product is known and trusted by the wider community. Excellent product quality and service quality will sustain the business, and the business can even launch more than one product if the producers pay attention to quality.

Quality management improvement in Salak Bojonegoro Village is implemented through the Tiered MSME Training, which is through training from the Industry and Trade Office, academics, and business actors who have reached a higher level.

However, concerning digitization, many MSMEs are still not consistently fully willing to manage their business by utilizing digital technology, many of which only utilize their gadgets for personal use such as chatting, posting photos, and personal activities on social media. They also mix their accounts with accounts for trading in the same social media. Among the MSMEs who participated in the tiered training, it turns out, and some have just learned how to send WhatsApp documents or use Google Calendar to arrange meetings. Therefore, it can be said that it turns out that the basic knowledge of MSMEs about digital technology is still minimal.

#### 4 CONCLUSION

From the above discussion it is concluded : The Surabaya City Government initiated tiered SME training and developed by academics to facilitate the readiness of SME actors by involving trainers in increasing the competency of SME actors in order to achieve competitive advantage in industrial revolution 4.0 era; (2) Challenges faced by SMEs in the industrial revolution 4.0 era are increasingly severe, so that they require commitment, the ability to adapt to change, and a strong willingness to learn; (3) Commitment, the ability to adapt to change, and the willingness to learn SME actors have heterogeneity.

#### REFERENCES

- Darmasetiawan, N.K., M.S. Idrus, E. A. Troena & U. Salim. 2013. Organizational trust, willingness to share, membership involvement, and knowledge obtaining (Study on

- health industrial cluster: PERSI, GP Farmasi, and Gakeslab Association in East Java. *International Journal of Business and Management Tomorrow SPIRI*, January 2013 (1): 1113-14,.
- Darmasetiawan, N. K. 2018. Social capital, tiered entrepreneurship training, and agrotourism development model of Kampung Salak Bojonegoro. *15th International Annual Symposium on Management (INSYMA 2018)*. Atlantis Press: Advances in Social Science, Education and Humanities Research 186.
- Darmasetiawan, N. K. 2019. Readiness and entrepreneurial self-efficacy actors of SMEs snake-fruit processed products in the conduct of e-business. *5th Annual International Conference on Management Research (AICMaR 2018)*. Atlantis Press: Advances in Economics, Business and Management Research, volume 74.
- Darmasetiawan, N. K., J.L.E. Nugroho, D.A. Christy & C. Anam. 2019. Trust, collaboration, and quality management in model of agro-tourism Kampung Salak Bojonegoro. *16th International Symposium on Management (INSYMA 2019)*. Atlantis Press: Advances in Social Science, Education and Humanities Research 308.
- Dunning, J. H. 1988. The eclectic paradigm of international production: a restatement and some possible extensions. *Journal of International Business Studies* 19(1): 1-31.
- Moleong, Lexy J. 2011. *Metode penelitian kualitatif*. Bandung: Remaja Rosdakarya.
- McKinsey. 2019. The wisdom of transformation: perspective of transformation. *Transformation Insight* July 2019.
- Niu, Kuei-Hsien, Miles, G. & Lee, C.S. 2008. Strategic development of network of clusters: a study of high technology regional development and global competitiveness. *Competitiveness Review* 18(3): 176-91.
- Niu, Kuei-Hsien. 2009. Organizational trust and knowledge obtaining in industrial clusters. *Journal of Knowledge Management*. Emerald Group Publishing Limited 14(1) 2010.
- Pratono, H. P, N. K. Darmasetiawan, A. Yudianto & B. G. Jeong. 2019. Achieving sustainable competitive advantage through green entrepreneurial orientation and market orientation: The role of inter-organizational learning. The current issue and full text archive of this journal is available on *Emerald Insight* at: [www.emeraldinsight.com/0888-045X.htm](http://www.emeraldinsight.com/0888-045X.htm)
- Sugiyono, 2013. *Metode penelitian kuantitatif, kualitatif, dan kombinasi (mixed methods)*. Edisi Keempat. Bandung: ALFABETA.