Village-Owned Enterprises Sustainability Analysis

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Abstract: The purpose of this research is to present and introduce a scheme that is easy to be accepted by village-owned enterprises (VOE) as a device to help creating strategy of organization in order to achieve sustainability, primarily related to economic, social-environment, and strategic-leadership. The study is expected to respond of a question on how some VOEs can be more withstand than other VOEs. A village, Ponjong, located in Central Java, was chosen as a research object since its VOE, Tirta Mandiri, is proven to be one of the sustaining VOEs in Indonesia. A three-layer business model canvas (TLBMC), a preliminary tool to evaluate the information related to VOE sustainability, were modified since some factors were not able to be used in proposed TLBMC by Joyce and Paquin (2016). From the findings, the VOE sustainability can be captured by three canvases used in this study such as the economic canvas, the social-environment canvas, and the strategic-leadership canvas. Accordingly, this study is projected to give contribution, particularly to VOEs that need to be sustainable so that villages communities may acquire further economically, socially, and environmentally.

Index Terms: Village-Owned Enterprises; Sustain; Business Model Canvas

1. INTRODUCTION

According to the Ministry of Village Regulation Number 4 (2015), Village-Owned Enterprises (VOE) is a business entity owned partially or entirely by the Village which manages assets and provides services to people, and other businesses that give benefit for community. The idea of establishing a VOE is to increase community welfare, decrease unemployment, and to support the village economically (Ministry of Village, 2015). From the total of 74,910 villages all over Indonesia, the number of VOE recorded by Government in 2017 is roughly 18,446. Despite the number of VOE, only some of those meet the objective to provide benefit for the community (Hartik, 2017). Among the number of VOEs, some VOEs awarded as best five VOEs by Ministry of Village in 2017, two of those are focusing on the tourism business. One of the success stories of VOEs depicted by Tirta Mandiri (TM), a VOE located in Ponjong, Central Java. Another VOE is Sejahtera Bleberan (SB), a VOE located in Gunungkidul, Yogyakarta. In addition, there are two VOEs focusing their business on utility. One of those is Karangkandri Sejahtera (KS), located in Cilacap, Central Java, and Srisadani (SR), located in Bojonegoro, East Java. The last VOE awarded by Ministry of Village is Tirtonirmolo (TN), positioned in Bantul, Yogyakarta, which is focusing on financing service (Berdesa, 2017). Not all the VOEs tell the same success stories, some of the villages are still struggling to create VOE, and some of VOE are still trying hard to survive. Using sample of Ponjong village and Bleberan village, two scholars proposed some hurdles faced by VOE such as communication, community involvement, managerial competency, infrastructure of VOE, and transparency problem (Pumamasari, 2016).

Some efforts exist to make a different definition related to sustainability. Stubbs and Cocklin (2008) agreed that sustainability is concurrently determination deprived of an obvious differentiation (Stubbs & Cocklin, 2008). Whereas based on definition stated by World Commission on Environment and Development (WCED), sustainable progress is a long term development strategy and the term sustainability refers to the capability to endure (Grober, 2009). A scholar mentioned that the ultimate objective of businesses is to generate prosperity and return for stockholders and disobey communal and ecological scopes as subordinate under the main goal (Stormer, 2003). In contrast, a scholar proposed that to maintain goal sustainability can be seen from three points of view such as an environment dimension, a society dimension, and an economy dimension (Ahmad & Ahmad, 2018; Harris, 2003). The economic dimension states that profit maximization is significant to achieve ultimate goal, human prosperity, by means of natural and human-made capital substitution (Ayres & Gowdy, 1998). On the contrary, the environment dimension assumes that nearly no exchange between natural and human-made capital can be made (Common & Perrings, 1992); (Daly, 1995); (Holling, 1973). As a final point, the social point of view focuses on human needs fairness (United Nations General Assembly, 2013). Hence, the sustainable development of a business is a significant path for organization to grow, by reducing production expenses and generating incremental income to expand the business (Cooper, 2014). The thriving of village-owned enterprises in Indonesia recently raises doubts for the sustainability in the future. This study comes up with business models of village-owned enterprises in Indonesia enabling to predict the ability of the business to sustain in the future. The aim of the study is to provide concept of strategy that is simple, relevant, and easy to understand so that the concept can be used to village-owned enterprises or be copied as strategic tool of the organization. Another goal is to provide limited building blocks so that village-owned enterprises management may not have difficulty to adopt TLBMC as one of their strategic tools. At last, this study is expected to find new different blocks from previous researches since this study is managed in different location and nature. This study is expected to contribute to villages all across Indonesia struggling to create VOEs and more outstandingly to villages in Indonesia sustaining their VOEs. The sustainability of VOEs are substantial for community’s prosperity and on top of that, crucial to surge the village community from poverty.
2. LITERATURE STUDY

2.1. Business Model

Business model is described as an exceptional component of measurement capturing value creation from several causes. They detailly explain that business model consists of the arrangement, transaction, and control that contributes to the value creation (Zott, Amit, & Massa, 2011). In addition, scholars argue that business model is a tool pinpointing the main profits for benefactors such as clients, providers, and partners as well as the nature of the products, and cash streams. In fact, business model is a model targeting to shorten the complicated realism used to comprehend the important foundation of a business and allows the forecasting of how a business should be done in the forthcoming (Weill, Peter; Vitale, 2001).

2.2. Business Model Canvas

The business model canvas (BMC) is a tool to categorize business model into nine connected constituents such as value proposition, sectors, consumer interactions, networks, key resources, key activities, associates, expenses and incomes to the customers (Osterwalder, A; Pigneur, 2010). By means of BMC, the organization can bring into line profit and value creation to customers to enable its sustainability (Ahmad & Ahmad, 2018; Osterwalder & Pigneur, 2010). The business model canvas conveying business model is a conceptualization of three most significant key aspects of organizations (Chesbrough, 2010); (Osterwalder, 2004):

1. How key factors and roles, or parts, are unified to send value to the consumer;
2. How those parts are interrelated within the organization and throughout its supply chain and stakeholder networks; and
3. How the organization creates value, or profit, throughout those interconnections.

2.3. Foundations of the Three Layer Business Model Canvas (TLBMC)

2.3.1. Foundations of the Social Layer of TLBMC

The social layer of TLBMC is based on a management approach focusing on the balance of the interests of the maximization of the organization’s profit and the needs of the standard stakeholders such as employees, shareholders, community, customers, suppliers, governmental bodies, or even more extended such as media, the poor and the environmental ecosystem (Miles, 2017); (Post, J.E., Preston, L.E., Sachs, 2002); (Hart & Sharma, 2004). Whereas, according to Joyce and Paquin (2016), later adopted by this study, the elements of social layer of TLBMC are social value, employee, governance, communities, societal culture, scale of outreach, and end-users (Joyce & Paquin, 2016).

2.3.2. Foundations of the Environmental Layer of TLBMC

The environmental layer of TLBMC is created based on research and practice on Life Cycle Assessments (LCA), a formal approach providing an appraisal of environmental influences across multiple types of gauges (Hendrickson, C.T., Lave, L.B., Matthews, 2008); (Pennington et al., 2004). The main objective of the environmental layer of the TLBMC is to evaluate how an organization creates more environmental gains than environmental loss (Joyce & Paquin, 2016). Adopting Nespresso’s business model conducted by Joyce and Paquin (2016), this study uses elements such as functional value, materials, production, supplies and outsourcing, distribution, use phase, end-of-life, environmental impacts, and environmental benefits.

2.3.3. Foundations of the Economic Layer of TLBMC

In this study, a business model canvas, created by Ostewalder and Pigneur (2010), simplifies an organization’s business model into nine interrelated components such as value proposition, customer segments, customer relationships, channels, key resources, key activities, partners, costs, and revenues. Economic layer of TLBMC is the basic business model canvas extended to environmental and social layer (Osterwalder, A; Pigneur, 2010).

3 METHODOLOGY

The research method used in this research is through qualitative approach with descriptive research type. Moleong (2006), reveals research methods with qualitative approaches as a research procedure producing descriptive data in the form of written or oral words of object and observed behavior (Moleong, 2006). Descriptive type is chosen since this study attempt to describe factors affecting village-owned enterprises sustainability in a comprehensive way. Osterwalder and Pigneur’s, through Joyce and Paquin (2016), mentioned about several factors affecting the sustainability of a business economically are cost, revenues, partners, activities, resources, value proposition, customer relationship, channels and customer segments (Osterwalder & Pigneur, 2010). To obtain the data, this study uses at least three methods such literature review, interviews, and field observation. Literature review are needed to acquire theoretical backgrounds related to this research. Literature may vary such as books, journals, regulations, and any materials consisting updated information connected with village-owned enterprises, small and medium enterprises (SMEs), and three-layered business canvas model (TLBMC). Data collection are then conducted by interviewing to some research participants such as the local government represented by head of village, the VOEs practitioners such as the Chief of VOEs, the Secretary of VOEs, and the Head of VOEs Finance Department. The
interviews were also directed to village populations and VOEs customers to further confirm some preceding interview results. In addition to that, field observation is also required to comprehensively depict the existing condition of the research objects. Collecting data by interviewing the participants is also planned as a part of field observation. Participants are chosen with certain conditions such as having good experiences and knowledge related to the village-owned enterprises and SMEs, and having direct involvement to the research objects. Based on research method used in this study, a research framework was created as seen in Figure 2. The information gathered from interviews were reduced and then some conclusions and data verifications were then used to create local theory.

**FIGURE 2: Research Design of VOEs Sustainability Analysis**

4 RESULTS AND DISCUSSIONS

One village, Ponggok village, was chosen as a research object since this village thrived to create nationally efficacious VOE, Tirta Mandiri. Tirta Mandiri VOE is located in Ponggok Village, about 15 kms from Klaten city, Central Java. In the area of 77,255 Ha, a number of 609 families or around 2,036 people inhabits the village. The village consists of four regions named Umbulsari region, Kiringan region, Ponggok region, and Jeblogan region.

2.4. Economic Business Model Canvas

From the interviews and observations, an economic business model canvas was created. Nine parameters were observed and analysed to thoroughly form the canvas as described as follows:

**Fig 3. Economic Business Model Canvas**

2.5. Key Partnerships

Key partnerships building block depicts the linkage of suppliers and allies in order to achieve the organizational goals such as minimizing risk or acquiring resources (Osterwalder & Pigneur, 2010). Key partnerships are stakeholders supporting the key activities of the VOE to deliver value propositions. Based on the findings, the first key partnerships is event organizers bringing out the customers to Ponggok. The event organizers made tourism packages involving Umbul Ponggok as one of their tourism offerings. Next key partner is supplier for “walker” and “warrior”. Walker is one of tourism features allowing customers to walk underwater by using of special tools such oxygen tanks and diving helmets. Meanwhile warrior is also a tourism features enabling customers who less likely to play in the water to play on the water by using walkway made from balloon. Other than that, supplier for underwater camera is also a significant supplier since one of the unique feature offered by the tourism spot is making photograph of memorable moments underwater. Food merchants located around tourism spot are also significant partners to the business. The merchants are all originally from Ponggok serving local culinary to the customers. Since the location of the merchants is quite close to tourism spot, the customers have beneficiary to grab the food easily. To ensure the safety of the consumers, SAR team is also employed to be one of the key partners.

2.6. Key Activities

Key activities building block explains about the most noteworthy actions so that an organizations can function successfully (Osterwalder & Pigneur, 2010). Key activities related to the delivery of value propositions are basically tourism activities. Since the main services are related to tourism activities such as ticketing and renting the tourism facilities such as walker, warrior, and underwater camera. Besides that, activities related to the business partners serving local culinary are also important and categorized as key activities.

2.7. Key Resources

Key resources building block define the most vital resources, in a form of material, financial, or intellectual, desired by an organization so that the organization can perform the business (Osterwalder & Pigneur, 2010). One of key resources is natural resources available in Ponggok. The unique and specific geographic location has created competitive advantage for the business since there are more than one water spring. The competitive advantage created by the geographic location is quite hard to imitate by other VOEs. Moreover, human resources are also significant to the sustainable business. Combination between good leadership from head of VOE and his subordinates creates a competitive team to deliver value to consumers. Another key resource is money allocated in village budget. Some of village budgets are allocated to finance the business.

Value Propositions

Value propositions is termed as a combination of products and services generating value for the customers (Osterwalder & Pigneur, 2010). Tirta Mandiri as a VOE has at least four value propositions delivered to the customers. First value proposition is a strong brand of Umbul Ponggok. Umbul Ponggok had been famous before Tirta Mandiri VOE was established. Another value proposition is a competitive price affordable for most of people in Indonesia. With merely fifteen thousand Rupiah, customers can be benefited with the main value propositions proposed by the business. On top of that,
new experience are also offered as one of value propositions. New experiences such as underwater photography, clear water, and swimming around fish are significant values provided by the business.

2.8. Customer Segments, Channels, and Customer Relationships
Customer segments is described as the variety of customers that an organization purposes to serve. Whereas channel is defined as the way that an organization interacts with and encounters its customers to convey value propositions. Customer relationships building block is termed as the types of connections founded with particular customer segments (Osterwalder & Pigneur, 2010). The value proposed by Tirta Mandiri is not delivered to specific customers. Almost all people can capture the value since at least two reasons such as affordable ticket price and wide variety services to almost all customer ages. Channel is a path where VOE can connect to customers to deliver value. Even though no specific marketing division and activity, yet some channels are used such as Instagram, Facebook, and Twitter. In addition to that, official website is also used, www.umbulponggok.com. In order to keep connected with the customers, call centre team and Handling Complain Unit (HCU) were created. The main function of call centre is to arrange meeting between customers with VOE officials whereas HCU is to collect feedbacks and complaints from customers.

2.9. Cost Structure and Revenue Streams
Cost burdening the business includes at least fixed cost and variable cost. The fixed cost mainly consists of employee salary, whereas the variable costs are utility spending and security wage. On the other side, revenue generated from business activities mostly comes from tickets, snorkelling devices rent, car parking retribution, camera devices rent, and toilet fee.

2.10. Social-Environment Canvas
Generated with similar method of economic canvas, social-environment is a canvas describing the social and environment variables to further explain their roles in VOE’s sustainability. The idea of combining both social and environment canvas starts from the data collected in the research are not sufficient enough to fill all building blocks proposed by Joyce and Paquin (2016). Furthermore, the building blocks in the existing social and environment canvas proposed by Joyce and Paquin (2016) are not suitable when some different yet important data are discovered.

2.11. History of Tirta Mandiri
One of the key success factors is Tirta Mandiri’s history of developing its business. The business started from credit union business creating a solution to people in Ponggok. At that time, many people in Ponggok were being victims of shark loans who gave loans for the people with high interest rate. To overcome the debt suffered by many people in Ponggok, a VOE was founded with credit union core business that gave loan to people in Ponggok with lower interest rate. Another business started from a solution delivered to the people of Ponggok is a water treatment. Water treatment business was created as a solution from a problem related to molase concentration in water consumed by the people of Ponggok. Since Ponggok at that time is a location for sugar plantation, the concentration of molases absorbed by soil and water was in high level. The huge water supply in Ponggok then used by the Tirta Mandiri to create values delivered not only for the VOEs but also for the people in Ponggok. Some values were then created such as fishery, tourism, retail, restaurant, and homestay business.

2.12. Employees
Some strategies made connected with human resources working in Tirta Mandiri. The employees are divided into two level, lifetime or official employees and contracted employees. Both official and contracted employees are involved in the excellent services training to further improve their skills to give the best services for the consumers. In term of compensations, there is a difference between official and contracted employees. Official employees were given salary based on their tenures and organizational level, however for the contracted employees, the salary depends on the projects accomplished by the staffs.

2.13. Organizational Commitment to Social Value
Tirta Mandiri stated its commitment to society in its vision and mission. One of the visions of Tirta Mandiri is to enable Ponggok Village to be tourism-based village. Another vision, Tirta Mandiri committed to create sustainable development involving society. In addition, in its mission, Tirta Mandiri is developing its asset to maximize sustainable revenue for the village. In practice, the commitment to social value comes in many forms. For instance, one house one undergraduate policy that enables each family in Ponggok can pursue undergraduate education by giving scholarships. Moreover, health insurance for each member of Ponggok’s society is paid monthly by Tirta Mandiri to ensure the productivity of the people of Ponggok. On top of that, to empower women in Ponggok, Tirta Mandiri also funds and creates home industry to produce fish-based products to enhance the family income.

Social impact focuses on negative effect on society in which the monetary profit created by Tirta Mandiri’s business opens the economic gap amongst villages surrounding Ponggok. The success of Tirta Mandiri is not easily copied by surrounding villages because of specific success factors. Another social impact is that some people in Ponggok village perceived that transparency related to Tirta Mandiri management was still poor.

2.15. Governance
In terms of how the executive managed Tirta Mandiri, there are two considerable factors contributing to the success of Tirta Mandiri. One of them is the decision-making process involving the staffs to enable the executive receives appropriate information. Latter, management also conducts evaluation and monitoring called “rembuk warga” to further collect information from staffs and people in Ponggok.

2.16. **Key partners**
Among all suppliers, there are two main suppliers that support of value delivered by Tirta Mandiri. Search and Rescue Team (SAR) is the first and most important supplier that provide safety services to the customers, mainly in Umbul Ponggok where many customers swim and dive. Second supplier is the supplier for walkers, a walk way supplier in Umbul Ponggok, and warriors, a underwater photography supplier in Umbul Ponggok.

2.17. **Future Plan/ Development**
One of innovation that will be developed by Tirta Mandiri is to increase transparency by creating application called “Desa Pintar” enabling Tirta Mandiri to provide informations related to profile of Ponggok Village, services delivered by the Government of Ponggok Village, and problem opposed by the society such as agricultural cases and fisheries cases.

2.18. **Environment Sustainability**
To further sustain the environment, Tirta Mandiri incorporated with Ponggok Village government purposely allocated environment fund to trees replanting in Mount Merapi as source of water flowing to Umbul Ponggok. Another factor related to environment sustainability is the village government commitment to have clean environment called Sapta Pesona consisting seven commitments such as safe village, orderly village, clean village, comfort village, beautiful village, amicable village, and memorable village.

3. **STRATEGIC-LEADERSHIP CANVAS**
Strategic-leadership canvas was created to adopt unidentified factors in TLBMC. According to facts captured in interviews, some facts about leadership and strategic management were yet to capture in existing TLBMC. Therefore, the strategic-leadership was created as follows:

![Fig 5. Strategic-Leadership Business Model Canvas](image)

3.1. **Key Strategies and Key Leadership**
Key strategies are strategies that significantly contribute to the sustainability of Tirta Mandiri. At minimum five key strategies were captured from the interviews. First, communication is explained as communication between management and staffs and communication between Tirta Mandiri and people of Ponggok. Communication between management and staffs in Tirta Mandiri can be in formal communication such as formal meeting discussion and formal evaluation from top to down, whereas informal communication can be in form of daily communication or man to man after hour communication to consult some private cases. Coordination and synergy are also considerably key strategy to Tirta Mandiri. Coordination was focused on good relationship with suppliers or other organizations. For instance, close coordination between Tirta Mandiri and local government to accomplish license administration related to the underground water utilization. In addition to that, the coordination between Tirta Mandiri and colleges or universities was also focused to develop future innovations. Whereas, synergy was also conducted between Tirta Mandiri and surrounding VOEs to share economic potential of the region.

3.2. **Competitive Advantage and Management Value**
Competitive advantages were identified from observations and interviews. First of all, the Tirta Mandiri, mainly in its core business, Umbul Ponggok acquired first mover advantage since its business had been started in 2010 before similar business model. The first competitive advantage has been supported by the second competitive advantage, natural resources – unlimited springs. The huge amount of water in Ponggok came from Merapi mountain so that the people in Ponggok had to sustain the environment by replanting the extinguished forests. The next competitive advantage is strong brand of Umbul Ponggok. Long before Tirta Mandiri was founded, Umbul Ponggok has been one of tourism spot which famous with water-based tourism. One tradition that has been enhancing the brand of Umbul Ponggok is “Padusan”, collective bathing, a tradition before Ramadhan in which some people from outside Umbul Ponggok came to Ponggok to perform Padusan. Thus, the combination of competitive advantage streams the management with certain value such as the increasing of village revenue for about 30% respectively and contributes to the increasing of village society welfare and reducing local unemployment.

3.3. **Regulation Compliance and Government Support**
Both regulation compliance and government support become essential factors determining the business sustainability. Some regulations that were obeyed are government regulation related to village (PP Number 72/ 2005), government of Klaten regulation number 21/ 2006, and village
regulation number 6/ 2009 related to Tirta Mandiri as VOEs. Beside regulation issued by the government as form of government support, educational support in a form of training was also being considerably government support. The last identified government supports are rewards and recognitions provided by province government to boost VOEs motivation to achieve better goals each year.

3.4. Human Resource Management (HRM)
Human resources management focused on shifting the human resource practices from social human resource practices to professional human resource practices. The shifting of human resource practices created alteration of the human resource behaviors such as professional peer to peer relationship. At first the peer to peer relationship was based on social relationship, thus the accountability and responsibility of working results were indistinct. On the contrary, after the changing of human management practices, the professional peer to peer connection began to contribute to the advancing responsibility of all employees to their jobs. Another positive impact to the organization is the advancement of discipline among the employees, since all staffs started to aware their job targets. Moreover, to further enhance the competition among employees, reward and punishment management approaches were applied.

3.5. Vertical/ Horizontal Integration and Strategic Partnership with other VOEs
Last variables in strategic-leadership are the integration and strategic partnership with other VOEs. In terms of horizontal integration, Tirta Mandiri has been successfully extending its business into several profit center such as water-based tourism, water-based restaurant, grocery store, wedding event organizer, and lodging. Whereas, Tirta Mandiri also integrates vertically by extending from farm to table the main value to the customers, water-based tourism. From upstream, fish stockbreeding was exploited to achieve economy of scale of the business. Next, the fish products were produced, developed, and marketed to consumers visiting to Umbul Ponggok. Tirta Mandiri can not sustain its business without involving other VOEs. Some VOEs have strong relationship with Tirta Mandiri, mainly as supporting unit to water-based tourism. On top of that, in the peak season, national holidays, the need of other villages to support Tirta Mandiri, mainly in the supply of parking area and waste treatment is inevitably needed.

4. CONCLUSION AND LIMITATIONS

4.1. CONCLUSION
To sum up, some points can be summarized as follows:
1. There were modifications of TLBMC into three canvases such as economic business canvas, social-environment canvas, and strategic-leadership canvas since of many information appearing in the observations and interviews were not be able to be put inside TLBMC, mainly in environment and social canvas;
2. Economic canvas captured variables supporting the sustainability of the business such as key partners, key activities, key resources, value propositions, customer relationships, channels, customer segments, cost structures, and revenue streams;
3. Social-environment canvas was created as a combination between social canvas and environment capturing variables supporting the sustainability of the business such as history of the VOEs, key activities, employees, organizational commitment to social values, social impact, governance, environment sustainability, key partners, and future development;
4. Strategic-leadership canvas was created as a platform to further explain the importance of the variables that are yet to be described in previous canvases, economic canvas and social-environment canvas. The canvas consists of variables such as key strategies, key leadership, management value, government support, regulation compliance, competitive advantage, human resource management, strategic partnership, and integration.

4.2. LIMITATIONS
This study is far from concluding since there should be succeeding researches related to the confirmation of the building blocks in the last two canvases, social-environment canvas and strategic-leadership canvas, which reaffirm the variables in the canvases.

5 REFERENCES


