Ensuring Local Wisdom Environmental Sustainability Through Sustainable Entrepreneurial Development: A Conceptual Framework for Kulonprogo, Yogyakarta

Kartika Nuringsih  
Tarumanagara University  
Jakarta, Indonesia  
kartikan@fe.untar.ac.id

Iwan Prasodjo  
Tarumanagara University  
Jakarta, Indonesia  
iwanp@fe.untar.ac.id

Nuryasman MN  
Tarumanagara University  
Jakarta, Indonesia  
nuryasman@fe.untar.ac.id

Abstract—This study aims to identify domain sustainable entrepreneurship and design an entrepreneurship development approach to ensure the local wisdom sustainability in Kulonprogo. The groundbreaking of sustainable development’s concept is to maintain the progress of economic development without decreasing natural resources or destroying environment. One of the goal of economic developments is to create entrepreneurs who are able to make innovations. To harmonize entrepreneurship with sustainable development is developed by sustainable entrepreneurship. In relation with best practices and the perception of resource persons, it is analyzed into four domains which includes: local wisdoms, social, environmental, and economic. The implementation domains through sustainable entrepreneurial development’s frameworks which includes: local government support, stakeholder’s engagements, knowledge sharing, sustainability attitude, recognize: sustainable development opportunity, and sustainable entrepreneurial intention behavior. The significant model, as an anticipation of the probability of local wisdom fading and degradation of the ecosystem quality, leads to development through doing research.

Keywords: development, entrepreneurship, environmental, local wisdom, sustainable

I. INTRODUCTION

Sustainable development is the world’s dream to meet the human welfare. Historically, the idea of environment sustainability is developed by World Charter of Nature in 1982 [1],[2]. The concept of sustainable development is completed in World Commission on Environment Development as the theme “Our Common Future” [3]. The groundbreaking of concept is to keep the progress of economic development without decreasing natural resources or destroying environment. This leads to sustainable development as a bridge to relate economy policy, ecology, and ethics. The government commitment is needed to broadcast the concept of sustainability toward business friendly, local government, and civil society [4].

One of the economic goals is to create entrepreneurship group that is tough independence. Schumpeter noted that innovative entrepreneur is necessary to change economy fast. In modern era, entrepreneur could be a trigger of economic growth and wealth creation [5]. The growth of entrepreneurship can be seen on the increasing number of micro enterprises, small medium enterprises, large enterprises, and Multinational Corporation. Lied on middle pyramid, small medium enterprises (SMEs) grow slowly in implementation of sustainability [6], facing scarcity resources so that it could omit environment problem [7]. So does it in the bottom of pyramid, micro enterprises are constrained by market failure sustainable innovations. As a result, this group needs government support and stakeholder engagement to create mixed innovation renewal with sustainable development. Consequently, micro enterprises, small, and medium enterprises (MSMEs) need support from government and participation of stakeholder. This leads to enable creating innovation in relation with sustainable development, to harmonize entrepreneurship, with the concept of sustainable development, is realized by sustainable entrepreneurship [8], [9],[10],[11],[12]. Related to environment concern, sustainable entrepreneurship has the potential to constraint the degradation slowly even gradually to improve the earth’s ecosystems [13]. As they face the challenge opportunities, entrepreneurs must not only think about profit but also must have social milieu, environmental care, and local wisdom respect. The last aspects could be significant because local culture or wisdom could function as a filter in maintaining for the future generation interest. In building this harmonization, it is needed government role and involvement of stakeholder to create sustainability entrepreneurial atmosphere especially at a small district or rural areas.

This study will explore the conceptual framework to ensure the sustainability on one of county (kabupaten) in Daerah Istimewa Yogyakarta province, which is Kulonprogo. The previous study finds innovation in managing destination with priority on conservation, civil society empowering, and local wisdom [14]. Besides this, there is local government commitment in achieving Sustainable Development Goals (SDGs) [15]. To anticipate the probability of the local wisdom fading and the gradation of ecosystem quality, it is built a synergy through sustainable entrepreneurial development. Therefore, the goal of the framework in building development of entrepreneurship in Kulonprogo through conversing local wisdom and environment. As an anticipation of fading local wisdom and degradation of ecosystem quality, the synergy is developed through sustainable entrepreneurial. Therefore, the basic of
the framework is identified what domain is maintained by society in Kulonprogo. Furthermore, as it is important to understand issues about cultural diversity and environment concern, so the goal of these frameworks are to design an approach in developing entrepreneurship in Kulonprogo by local wisdom and environment conservation. This study will explore later with introduction, literature review, research method, results and discussion, and closed by summary.

II. LITERATURE REVIEW

A. Sustainable Development

According to Brundtland Commission: “Sustainable Development is development that meet the need of the present without compromising the ability of future generations to meet their own needs”. It contains within it two key concepts: (1) The concept of need in particular the essential needs of the world’s poor to which is overriding priority should be given. (2) The idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet the present future needs. [3]. The needs among generations are considered on every aspect of development and sustainability. To realize the expectation must be supported with technology and involvement of Non-Governmental Organization (NGO) as educator and control on development implementation.

As the commitment for future generations held several agenda, such as: Earth Summit in Rio de Janeiro in 1992. Kyoto Protocol as Frameworks Convention on Climate Change in 1997. In 2000 Millennium Declaration in New York might suppose Millennium Development Goals (MDGs), then the World Summit Sustainable Development was held in Johannesburg in 2002. Twenty years after Rio de Janeiro (Rio+20), it was held the Earth Summit again. Furthermore, United Nation Frameworks Convention on Climate Change was held in Paris in 2015. In the same year they agreed that MDGs with the result 17 SDGs targets that will be implemented until 2030. Several are adopted in developing entrepreneurial become sustainable entrepreneurship.

B. Linkage Sustainable Development Sustainable Entrepreneurship

As Schumpeter stated that entrepreneur is a group of society who could create innovation in economic growth. Whereas the sustainable development is to protect the future. Whereas the goal of development of generation interest through synergizing economy aspects, ecology, and ethics [3]. The model becomes triple bottom line [16] with the goal to reach sustainability on people, planet, and profit [17]. According to Cohen and Winn [13] sustainable entrepreneurship insisted a process to find, to create and to use goods and services as opportunity in the future. Dean and McMullen [18] insisted the market failures. Hockerts and Wustenhagen [19] insisted “as the discovery exploitation of economic opportunities through the generation of market disequilibria”.

Schaltegger and Wagner [21] stated “an innovative, market-oriented personality creating economic, and societal value”. Thompson et al., [22] sustainable entrepreneur is involved in institutional change. These include four aspects of sustainable entrepreneurship, such as: to find opportunity, market failure, innovation for social problem and environment, and changing.

As an environment challenge, sustainable entrepreneurship domain is not limited on triple bottom line in Elkington [16] model. According to Majid and Koe [23] sustainable entrepreneurship develops harmony among four domains such as: cultural diversity, social equity, environmental responsibility, economic viability. Racelis [24] introduced “Quintuple Bottom Line” as a model in Asia which includes five domains such as: economic, social, ecological, cultural, and ethical. Belz and Binder [8] focused on three domains but they are done gradually from double to triple bottom line. Refer to Kainrath introduced three approaches for ecopreneur, namely: green innovation, green opportunity, and green commitment [25] so that it could be a stepping stone for sustainable entrepreneur. Although it is broken down into several domains but the urgency of sustainable entrepreneurship is to push the entrepreneur to face competitive market and to implement “sustainability driven entrepreneurs”[26],[27].

III. RESEARCH METHOD

To describe framework sustainable entrepreneurial development, observation and interview with five resource persons in Kulonprogo, such as: Ibu Tumirah (Paguyuban Batik Lumintu), Ibu Parmi (Batik Mandiri), Bapak Sudadi (Pokdarwis Kalibiru), Bapak Parjiman (Pokdarwis Sermo), and the Cooperation manager (KSU Jatirogo). The informants have an orientation toward local wisdom and conservation as described on Table 1.

Table 1: Description of selected respondent

<table>
<thead>
<tr>
<th>Entrepreneur</th>
<th>Duration</th>
<th>Industry</th>
<th>Sustainable Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batik Lumintu</td>
<td>25 years</td>
<td>Traditional Clothing</td>
<td>Traditional and modern motif, nature culture, nonemoployment</td>
</tr>
<tr>
<td>Batik Mandiri</td>
<td>20 years</td>
<td>Traditional Clothing</td>
<td>Traditional and contemporary pattern, handling tone</td>
</tr>
<tr>
<td>Pokdarwis Kalibar</td>
<td>9 years</td>
<td>Eco Tourism</td>
<td>Eco-tourism, conservation, empowering communities</td>
</tr>
<tr>
<td>Pokdarwis Sermo</td>
<td>10 years</td>
<td>Eco Tourism</td>
<td>Eco-tourism, conservation, empowering communities</td>
</tr>
<tr>
<td>Koperasi Jatirog</td>
<td>11 years</td>
<td>Organic</td>
<td>Organic farming, empowering, green money, sustainable</td>
</tr>
</tbody>
</table>

Table 1 describes the endeavors in maintaining wisdom values, heritage, and respect on social environment and living environment in business activities. Although on the simple level, if it is examined from sustainability effort. Thus, they have innovated, tried to penetrate market failure, and enable to recognize the green market opportunity. Collecting data was done by interviewing face to face on May, 2018. The interview questions include: constraints, government and stakeholders support, cohesiveness group, market opportunity, idea to grab opportunity, and expectation on sustainability. The resource person’s answers were analyzed qualitatively in relation with sustainable entrepreneurship domain. Based on the resource person perceptions and real examples from local
government, then they are formulated as developing interest on sustainable entrepreneurship. This model is expected to be a foundation in building a sustainable entrepreneurs prototype.

IV. RESULTS AND DISCUSSION
A. Result
i. Overview of Kulonprogo Region

Kulonprogo is a part of Yogyakarta province. It has committed on sustainable development. To put up with diversity and local wisdom appreciation, it is maintained by society and entrepreneurs. Lied on rural area is agropolitan that contribute to local economy. The available of resources for business sector depends on the performance agriculture sector. On the other hand, the sustainability of agriculture sector is influenced by creativity and innovation of MSMEs. Based on cause and result, it is needed an approach to keep local wisdom and conservation as a foundation in building a business. Kulonprogo has the biggest rural area, so it could trigger MSMEs performance through sustainable rural entrepreneurship. According to Potret Potensi Ekonomi [28] there are 60.803 micro businesses, 3,485 small businesses, 390 medium businesses and 14 big scale businesses. There are 94% businesses in the bottom of pyramid, 5.90% business in the middle pyramid. As a consequent, this group needs government and stakeholder support. In order to meet with sustainable development and to trigger their interest on entrepreneurship.

Best practices indicate that icon Bela and Beli Kulonprogo success in realizing sustainable development, e.g.: (1) Catching green market opportunity through export organic brown sugar. The mechanism of production and quality control is done by cooperation, so it could realize social welfare, social development, and ecological protection. (2) Connecting partnership in managing community based tourism. This approach is to raise rural economy, to conserve forest and scarce animals and to maintain local wisdom. (3) In the context double bottom line showed through cooperatives among retailer network and cooperation by branding Tomira. Tomira stands for “Toko Milik Rakyat” (Shops owned by people). The regulation gives opportunity for the owner of MSMEs to place their products among the retailers. The regulation may result in giving positive effect on the survival of commercial activities of Kulonprogo inhabitants (4) Starting with mangrove forest as tourism destination for the beach people. This action proves the commitment in trigger economic growth and ecosystem conservation along the beach area

(5) Creating Geblég Renteng style as innovation in activating local market and opportunity for batik producers. The performance could appreciate economic growth and social culture development. (6) Building Kampung Jamparing as an appreciation to arch art in the ancient Mataram Kingdom. The information indicates government roles in realizing economic development, environment responsibility, maintaining local wisdom and social justice for Kulonprogo citizen. From the businessman point of view indicates problems and expectation on sustainable development.

II. Entrepreneur Perceptions towards Sustainability
Based on the progress above, it is compared to the actor’s perception in running sustainable business. The answers of the respondents are summarized as follow:

i. The chairman of Batik Lumintu: the problem in managing and coordinating business groups consists of capital, waste management and the shortage of batik workers. Government supports to the center of batik industry, while the stakeholders support in building an association (paguyuban). The cohesiveness is shown by working together in growing business. The future opportunity is potential, because they work together with many galleries in Yogyakarta. The idea to take market opportunity by using limited natural color. The expectation on sustainability partnership will implement eco-friendly business. Having willingness to train batik making to girl teenagers and asking other women to do batik.

ii. The owner of Batik Mandiri: the business managing problem consists of capital, renewal of production equipment, and infrastructure in waste processing. The government support is given to the center of batik works. While stakeholder support is given to innovate style of modern ones and marketing opportunity. The cohesiveness group is done by information sharing among themselves. The future opportunity is potential because it works together with some galleries in Yogyakarta. The idea to take market opportunity is by producing different classical types with other counterparts. The expectation of sustainability is the partners will use eco-friendly business and maintain the typical of Yogyakarta batik.

iii. The chairman of Pokdarwis Kalibiru: The problems in managing tourist destination are: The fluctuation number of visitors, innovation, and location. Government supports by building infrastructure to tourism destination and promotion. Stakeholders support with partnership to open destination and promotion. The cohesiveness destination managers share information in developing natural tourism. The future opportunity is potential as the infrastructures are built and tourism is developed in Kulonprogo. The idea to take market opportunity is done by improving service quality, introducing local wisdom, involving society in cultural affair and supporting facilities. The expectation on
sustainability is using sustainable tourism development with conservation priority at the hill of Menoreh.

iv. The chairman of Pokdarwis Sermo: The problems in managing tourism destination are: innovation development and destination management. Government supports by building infrastructure, license and promotion. Stakeholders support by helping promotion. The cohesiveness managers share information in developing nature tourism. The future opportunity is very potential as developing infrastructure and tourism in Kulonprogo. The idea to take the market opportunity is done by improving service quality, introducing local wisdom. Furthermore, it involves society in cultural affair and homestays. The expectation on sustainability is by implementing of sustainable tourism development with priority of conservation and protection of scarce animal in the forest Menoreh.

v. The manager of Koperasi Jatirogo: The problems in managing cooperation are: The fluctuation organic sugar market demand and the coordination with traditional coconut sugar makers. Government supports to found coop legal entity, product knowledge, and coop development fund and introducing with investors. Stakeholders’ support from coop management assistance, organic brown sugar marketing and mentoring farmers. Coop members’ solidarity was realized by supplying raw materials involving 1572 coconut sugar makers in Kulonprogo. Opportunity in the future is felt potential because benefits of organic sugar are better than non-organic. The approach is simple, but it enable continuously creating renewal for 94% micro enterprises at the bottom pyramid and 5.90% SMEs on the middle pyramid level.

iii. Sustainable Entrepreneurial Development’s Frameworks

In realizing expectation in building sustainable entrepreneurs in Kulonprogo, it is developed a heuristically approach. The model consists of local government support, stakeholder engagement, knowledge sharing, sustainability attitude, recognizing sustainable development opportunity and sustainable entrepreneurial intention behaviour. Figure 1 shows the framework mechanism of sustainable entrepreneurial development in Kulonprogo.

![Figure 1: Framework of Sustainable Entrepreneurial Development](image)

Firstly, Local government support (i.e. regulation, licensing, training, education) forms an interest in sustainable entrepreneurship. Support is aimed at new entrants and incumbents because it is certain that there are differences in responses and involvement of two groups [19] The effect of government support on the attitude or intention is among others Gelard and Saleh.; [29] with implementing entrepreneurial support models. Secondly, Stakeholder’s engagement [30] helps create sustainable innovation. MSMEs are in the pyramid bottom middle so that the role of stakeholders (i.e., banking, social organizations, communities, corporate social responsibility) is needed to capture market opportunities or overcome market failure. Thirdly, Knowledge sharing illustrates the
habit of exchanging knowledge among entrepreneurs. Fourthly, the three constructs affect sustainable attitude. According to Linan and Chen [31] "Attitude toward the referral to the degree to which the individual hold a positive or negative personal valuation about being an entrepreneur". Fifthly, with attitudes, entrepreneurs are motivated to recognize opportunities [20]. Sixthly, besides this, with establishing sustainable entrepreneurial intention [9]. The mechanism in examining the relation between sustainability attitudes with the intention refers to theory of planned behavior from Ajzen [32].

Generalizing above framework has an implication with SDGs. If it is aligned with United Nation Development Program’s (UNDP)[33], this model is relevant to the SDGs target, specifically: no poverty, decent work economic growth, climate action, life below water, and life on. This indicates that social target, economy, environment, and social wisdom energizes each other, so it could red network among sustainable entrepreneurship, sustainable development, SDGs in Kulonprogo, Yogyakarta.

B. Discussion

In entrepreneurship, the value creation process is built through three stages, including ideas development, gathering resources, managing and operating business. The idea of sustainability will follow every stage in a sustainable entrepreneurial process. The goal of value creation is not limited to entrepreneur value (i.e., profit, return on investment, reputation) but appreciates other values, such as: customer value (eco-friendly product or service), cultural value (preservation of local wisdom, heritage), social value (empowerment community, gender equality, education, health), and environmental value (nature conservation, waste minimization). In the small scale enterprises, these achievements are relatively difficult to realize simultaneously so that the stages of the double bottom line are needed, then triple bottom lines are like references [8]. For example in traditional clothing (resource persons 1 and 2) have an economic, social, and local wisdom orientation. Whereas eco-tourism and cooperation (resource persons 3-4) have a broader orientation, namely economic, social, local wisdom, and ecological. Although with a simple idea, limited resources, and the ability to manage the business on an autodidact basis, they are able to proceed with sustainability.

Therefore, the purpose of frameworks in figure 1 is to align between (1) government interests, (2) entrepreneurs' expectations, (3) stakeholders' concerns, (4) market demand, (5) needs for future generations. The commitment of the regional government is realized through best practices so as to realize the meaning of sustainable development "as a development to meet the need for the present without sacrificing the future generations to fulfill their need", various parties involved in entrepreneurial development must prioritize the ethics and morality of sustainability.

V. SUMMARY

The purpose of the study is to design an entrepreneurial approach and ensure the sustainability of environmental in Kulonprogo local wisdom. The basic concept of sustainable development is to maintain the progress of economic development without reducing natural resources or disturbing the environment. One of the goals of economic development is to create entrepreneurs who are able to make innovations. Harmonization of entrepreneurship is developed through sustainable entrepreneurship. In line with best practices and perceptions of resource persons analyzed four domains include: local wisdom, social, environmental, and economic. The implementation of domains through sustainable entrepreneurial development's frameworks consists of: local government support, stakeholder engagement, knowledge sharing, sustainable attitude, recognize sustainable development opportunity, and sustainable entrepreneurial intention behavior. The urgency of the model is to anticipate the possibility of diminishing local wisdom and decreasing ecosystem quality so that it is developed through research.

REFERENCES

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[33] United Nation Development Programs, Sustainable Development Goals.