

# Challenges Faced in Creating Local Innovation: An Integrated Model of Quadruple Helix for Social Entrepreneurship

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**Abstract.** The local innovation is one of the determinants of success in preparing society to face today's competition. One solution that can answer these challenges is to increase the role of social entrepreneurship. The purpose of this study is to develop factors that can be considered by social entrepreneurship in creating local-based innovation models that can have a positive impact on improving people's lives. This research used a qualitative approach based on the needs of a concept or phenomenon further. This Research used in-depth discussion of the concept by conducting semi structured interviews and observations. Interview data were obtained from seven participants who were directly involved in local innovation-based entrepreneurial activities. The result of this research was that in implementing the concept of Socio Entrepreneurship, the role of government, universities, companies, or foundations was needed as well as the role of the community itself. This study also contributed that in implementing the social entrepreneur should consider the quadruple helix model.

**Keywords:** Social Entrepreneurship, Local Innovation, Quadruple Helix, Sustainable Development

## 1. Introduction

Society is increasingly ready to face various kinds of changes because of increasingly intense competition. To be able to survive and succeed in facing competition, an innovation-based strategy is needed. Innovations that can be applied in empowering communities are based on local [1]–[6]. However, creating locally based innovation is not easy because local-based innovation requires the roles of various parties. So that in creating locally based innovations it is very appropriate to apply the quadruple helix model. The quadruple helix model is a model by integrating the various roles of local government, universities, communities, and local business people together [7]–[9]. The local-based innovation can contribute to society in doing business and entrepreneurship, especially social-based entrepreneurship [7], [9]–[12]. Social entrepreneurship has become a key area of interest in the entrepreneurship discourse. Social entrepreneurship is an approach based on complex social needs and social value creation [13]–[20]. However, there were still limited study about social entrepreneurship topic, although

this topic has received better attention from academics and practitioners [15], [18], [21]–[24]. For the innovative business idea based on social approach, social entrepreneurial has opportunity recognition and exploitation as a core requirement for competitive advantage. The business innovation that can be implemented regarding the quadruple helix model which is based locally innovation. The entrepreneurial implementation needs social and economics approach and results. Some literature mainly agree that the social impact become a core goal of social entrepreneurial activities. The various definitions about social entrepreneurship are the important thing about the social and economics approach for the successful about social entrepreneurship. The role of social entrepreneurs can contribute to improving performance and community empowerment by encouraging the creation of local innovations that provide value added to the community.

As Catalysts of Creating Local Innovation, Social entrepreneur correlated with the quadruple helix model is in cooperation with the various parties involved in cooperation in achieving the SDGs. SDGs indicators were correlated to the Human Development Index. The results of these studies are that empowerment can be successful with the efficiency of local resources, such as people, goods, maximized the process of training or awareness of society. Community care is a major influence in the maintaining of the system for sustainable empowerment. Community empowerment is closely related to the triple helix model of involving the government, industry, and the role of universities [25], [26]. However, the empowerment with the referring to the concept of the triple helix is lacking if there is no community participation. So the model which is more appropriate in community development is used a quadruple helix, with involving the community in empowering communities so the innovation can be achieved [1], [27]–[30]. This study, in addition to referring to the quadruple helix, is also considered the role of non-governmental organizations (NGOs) as non-profit organizations in the implementation of community development programs. The NGO models fill the gap between the interaction and build opportunities for each connection [31]

Based on that phenomenon, we need a model for Catalysts of Creating Local Innovation with increasing the role of social entrepreneurs. Based on the research background, the formulation of the problem is how the model of The Creating Local Innovation in Quadruple Helix Model (CLIQ) to improve social entrepreneurship based on goals and targets of the SDGs, to improve the standard of living. So, the purpose of the study was to determine the model strategy based CLIQ can improve the standard of living, to increasing the role of the social entrepreneur.

## **2. Literature review**

### **Social entrepreneurship**

Social entrepreneurship is a concept, which has been consolidated in recent decades in various parties like government, social observer, international organizations which concerned with economic and social issues. [8], [9]. The nature of entrepreneurship has changed from simple perception to a more modern and complex perception. Social entrepreneurship is the creation of new ventures with social goals. The main point about social entrepreneurship is how the social needs and community can collaborate with the social sector not the commercial sector [6], [32]. Recently several scholars have realized the importance of social entrepreneurship as a driver of social values, and carried out research in the field [10]. It is emerged as a new label to describe community work, organizational and public organizations, as well as companies working for social causes for profit [7], [11], [18]. This does not mean that social entrepreneurial ventures occur only in a non-profit context. Not all a non-profit is socially entrepreneurial, just as not all

profitable businesses are entrepreneurial. Social entrepreneurship can catalyze the process transformation for social community with integrating social economics needs. The social and economic needs is to ensure the sustainable entrepreneurship which an emphasis on the search for solution to deep rooted which the social problems that cause human suffering [33].

#### **The Creating Local Innovation in Quadruple Helix Model (CLIQ)**

The CLIQ is a concept in creating a locally based on innovation by referring to the model quadruple helix. The Quadruple Helix model is an improvement of the triple helix. Quadruple helix model is a development model from triple helix model [1], [24], [27], [34], [35]. Quadruple helix is a model which can collaborate and result a synergy with four parties. The four parties are government, business, universities, society, or community. The four parties must be integrated as a drivers for improve the innovation and creativity business [7], [36], [37] It is only done between the three parties, namely the government, academia, and business. The quadruple helix concept is a very appropriate model for increasing community empowerment in local-based innovation. where the community will work together with the government, business, and universities in creating local-based innovations.

### **3. Methodology and Data Analysis**

This study used a qualitative approach based on the needs of a concept or phenomenon further about social entrepreneurship. The discussion about social entrepreneurship is still limited. The concept of creating local innovation by considering various parties, namely the quadruple helix, is still limited discussing. So that it takes an in-depth discussion of the concept by conducting semi structured interviews and observations. The study was a descriptive study in which researchers will describe the study by analyzing phenomenon, events, attitudes, thoughts of people individually, either obtained from the interview data, and documentation. Interview data were obtained from seven participants who were directly involved in local innovation-based entrepreneurial activities in Malang Community Boarding. Interviews were conducted with community leaders in the area who are directly involved in the creation of local innovations and the main actors of the local business. For reason for anonymity the community leader and social entrepreneur identified as C1, social entrepreneur identified as L1, L2, L3, L4, L5, L6.

From the results of the interview, a transcription process was carried out to get a comprehensive view of local innovation-based social entrepreneurship. After being transcribed manually, the transcription was then summarized and sent to the selected participants for cross-checking and data validation. The selected participant for cross-checking was a community leader. These follow-up checks from the participant ensure that the subjectivity of the researcher did not dominate the interpretations of the data [38]. In addition, the validation process was also carried out by observing a community leader to get a more comprehensive opinion of social entrepreneurship. A thematic approach to the organization and interpretation of data was employed in which the data were arranged under meaningful interpretation. This research was organized and analyzed inductively by looking for key phrases, terms, and practices within the data. These themes were further analyzed and matched with the existing themes identified from the literature review. Based on the thematic approach, we get the model-based on the social entrepreneurship which is integrated with the creating local innovation in the quadruple helix model, in accordance with the existing reality. The model would also be linked to the SDGs.

#### 4. Research Result and Discussion

The summary of research results is depicted in Table 1. The finding from this study suggests that there are 7 main strategies to creating local innovation for successful social entrepreneurship. However, some barriers exist in implementing those strategies.

**Table 1.** The main strategies to creating local innovation

No	Participants	C1	L1	L2	L3	L4	L5	L6
1	Increasing income with innovation of	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Gain commitment from local	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Support from community	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Collaboration with other business	Yes	Yes	Yes	Yes	Yes	No	No
5	Cooperation with university	Yes	Yes	Yes	Yes	Yes	No	Yes
6	Support to promotion all local	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	Support to creation local innovative product with effective operations and	Yes	Yes	Yes	Yes	Yes	Yes	Yes

From the opinions of the participants, there is a need for integration between various parties in order to produce better local-based innovations. As seen in Figure 1.



**Figure 1 :** The support Factors for successful social entrepreneurship

In Figure 1, local governments, communities, university, businesses, in an integrated manner can improve the performance of social entrepreneurs in creating local-based innovations. So that entrepreneurs can support the achievement of the SDGs program.

Based on the research results, the model-based implementation of social entrepreneurship concerning the Sustainable Development Goals by using the creating local innovation in the quadruple helix model. From the model, the quadruple helix model is very appropriate, if it is used to increase local-based innovation based on the concept of social entrepreneurship. The social entrepreneurship is related to how to empower people to create innovation. This model is based on the triple helix in empowering the community. The triple helix model in empowering people felt less precise because it does not involve the wider community in creating innovation. So that model is less appropriate when applied for the concept of social entrepreneurship based on empowering communities. Community empowerment is one of the main goals of improving themselves in a developing country. The empowerment can always continually evolve through a good relationship between the parties to improve innovation in social entrepreneurship. The parties must be strongly connected, to become a solid strength and support each other. So it is appropriate if the model of social entrepreneurship refers to the principles of a quadruple helix [9], [28], [29], [35].

In the quadruple helix models, it is seen that social entrepreneurship is the axis for driving the role of government, businesses, universities, and society. So, the role of the social entrepreneur is critical for collaboration among each of these roles in empowering the community. So, it went on so that all of society can work together to build a village for the creation of a healthy environment, advanced, prosperous so that the necessary process of integration with the various parties that could contribute to the success of social entrepreneurship. The role of universities, government, business, and society must work in synergy to the success of such empowerment. The role of social entrepreneurs in empowering society can engage with the university. The university has built that will be the coordinator in increasing the role of the social entrepreneur. University strengthens cooperation with the community development program which this program is currently implemented by a lot of university. The target is carried out together with stakeholders including local government, institutions, and the public in the broad sense. The community development program becomes one of the cohesion programs tri dharma university activities in support of human resource development, to achieve the SDGs program which is currently underway. The role of local government in supporting social entrepreneur plays a very big role. The government already has regulation about the empowerment of rural communities and villages. Local government support for the boarding of the people is also quite large. The role of government today is confined to policymakers. The role of government is quite a bit in helping communities improve innovation. During this empowerment, lack of support or funding from a local municipality for the development of the empowerment of the community.

So, the role of the greatest success is there on citizen empowerment. Residents are very enthusiastic about building a better region. To see the potential for community empowerment and the people who are already independent. Although people in the community boarding already independent, still need the support of local authorities in further improving the independence of citizens. Some businesses have empowerment programs. The NGO also contribute with community empowerment program. So, the community can get a lot of benefits to increase the business. Social entrepreneurship has a major program is to alleviate poverty and public welfare ". In the economic field, the community managed to work with. Those who

belong to the rich are willing to help the poor, in a variety of ways. For example, those who have the capital are invited to develop goats as share cropping, giving venture capital to make the blacksmith craft successfully absorbed tens of people, making the pool, producing seeds, and others.

This study identification is based on sustainable development goals (SDGs) and was associated with the study of literature, observation, and interview-based on social entrepreneurship [39]–[43]. This is consistent with the first objective of the SDGs. This is evident from the various activities held by the people for the prosperity of the community schools. If the first goal in the community boarding in Malang will be achieved, then the other destination is relatively easy to achieve. To achieve the target of SDGs, the necessary role of the leader to motivate and enhance community development activities. The role of the leader in the community boarding in Malang, very large in motivating people around. This is evident from the various activities organized by the community boarding in Malang. Activity from start to children up to the elderly have well-coordinated.

In achieving the SDGs another goal, namely, to end hunger, various productive activities were carried out at the school of the people, to try every household income with various businesses. This can be seen from various economic activities of citizens, among others: bricklaying, carpentry tools manufacture and agriculture, livestock operations catfish, fish farming. So, from a wide range of economic activities at the school proved that the community boarding in Malang has been trying to achieve all SDGs that promote sustainable economic development, open and sustainable, jobs are intact and productive and decent work for all. While on the destination SDGs relate to building durable infrastructure promotes sustainable industrialization and open and encourages innovation, it takes the role of government. The government has been instrumental in building the infrastructure. So that the quadruple helix models with SDGs have enormous relevance. It is mentioned at the 16th destination SDGs that is promoting a peaceful society and is open to development that is sustainable, providing access to justice for everyone and building effective institutions, responsible, and open at all levels. So, the role of government, universities, businesses, and the community should be based on the destination SDGs. Various activities have also been integrating the people boarding the roles of various parties by the proportions. So, the purpose of SDGs in the seventeenth point can be realized.

#### **4. Implication and Suggestion for Future Research**

The challenge in this research is how the integration of various parties in the quadruple helix model can create local-based innovations to gain a competitive advantage, especially in the disruptive era. The other challenge is how the seventeenth SDGs to be able to work well then, the needs for the roles of various parties ranging from governments, universities, and businesses also society at large, according to the model quadruplex helix. At the destination, SDGs also clearly mentioned the various targets that must be met in achieving the objectives of sustainable development. These targets can not be met without a commitment, the government roles, and together with various parties. the community boarding in Malang is committed to fulfilling sustainable development goals (SDGs). The realization of the activities of the community boarding attempted to meet the target SDGs by involving the various parties under the model quadruplex helix. The activities carried out in the community boarding in Malang, activities for children up to the age that is no longer productive, highly innovative. The activities of community empowerment at the community boarding could take place, also because of the role

of leader of the boarding were able to feed that passion and motivate citizens in empowering the community, as well the role of universities in promoting the spirit of citizens to be more motivated for developing capabilities to better improve financial capabilities are also very large. So the purpose of sustainable development by considering the model quadruplex helix on the community boarding in Malang did well. So the community boarding in Malang either already well developed or undeveloped, you should start to consider how to integrate the roles of the various parties regarding the quadruplex models helix, so it hopes will bring innovative activities to empower communities. The community boarding in Malang either already well developed or undeveloped, have to think about how preparedness SDGs, with the help of various parties. For further research, you should consider how the role of media can creating local innovation especially in the disruptive era and SDGs achievement target. As we know, the development of media now is growing rapidly. So to integrate with the media, we can propose the Penta helix model for creating local innovation and to increase the role of social entrepreneurship.

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