Rural Development:
Triple Helix in Minang Ethnic Enterprises

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Abstract—This paper reveals how the triple helix in rural development is dominated by Minang ethnic entrepreneurs. This research was conducted qualitatively by conducting interviews with every actor involved in rural development (government, academia and industry / entrepreneur / businessman). Research locations in West Sumatra by interviewing the government (related agencies, academics and entrepreneurs). As many as 20 entrepreneurs with the topic of rural development. Academics are also involved, namely by interviewing 4 academics as decision makers and also as researchers on entrepreneurship so far. The results of the study reveal that the Minang ethnic entrepreneurship plays a small role of the government in rural development. Many of the programs launched have not been in accordance with the needs of rural development. In fact, entrepreneurs who have contributed fully to entrepreneurial development in rural areas, both physically and in soft skills development. The limitation of this research is that all actors involved in rural development are still carried out in a small sample with in-depth interviews. For further research, it can involve large samples with quantitative methods.

Keywords—triple helix, industry, qualitative, academics, entrepreneurship

I. INTRODUCTION

So far, the relationship between local government and academics has begun to change. Every university or college has done a lot of cooperation both with local governments and with business people or entrepreneurs. Everything happened because there were demands from the government which were stated in several programs, including research and community service programs. But the problem is that the cooperation carried out so far has not been synergized properly so that the initial goals to be achieved are still experiencing obstacles.

There is a lot of cooperation between the three actors (academics / intellectuals, government and businessmen) but it has not had a significant impact on rural / nagari development. Many activities seem to lose direction and even tend not to be on target and in the end development does not reach its goals. If we want to explore, how much cooperation is between tertiary institutions and nagari / rural areas, but until now there has never been an evaluation and no one has tried to assess measurement. It seems that every program is a kind of project where when its period is over, the project and cooperation will also end without asking the onjek that was used as a project about its achievements. Even though further assistance in coaching is very important to achieve goals. Currently there is a lot of attention to villages / nagari both by academics and businessmen to encourage entrepreneurship. Opportunities to make rural areas or nagari become entrepreneurs are of course also driven by factors of natural conditions other than human resources, such as if the area is a tourist visit, there will be many entrepreneurs who can be encouraged to create various products or services to help achieve tourism programs.

Entrepreneurship has been recognized as an important mechanism for promoting economic growth and social value in developing communities [1]. In particular, rural, suburban, and less favored areas suffer from depopulation, lack of infrastructure, great dependence on agricultural activities and fragile socio-economic structures as a whole that can ultimately benefit from economic diversification through entrepreneurial activities [2].

The issue of the science of entrepreneurship is currently considered very important even though entrepreneurship is still said to be a new science for Indonesia in the midst of a part of the world that considers entrepreneurship as the pillar of a country's economy. Entrepreneurship has started to become a phenomenal issue for the government since Indonesia experienced the monetary crisis in 2007/2008, facing this crisis only entrepreneurs, especially SMEs, have survived and are able to contribute to the country because the items in SMEs are far from being the tools of the crisis. In addition to economic and social benefits, there is evidence that rural entrepreneurship contributes to the valorization of local resources, cultural heritage and quality of life [3]. In the Minang ethnic community, entrepreneurship is carried out by the majority of the community. So that the Minang community has been better known for entrepreneurship which has spread to almost all regions of Indonesia [4].

This has an influence on life in the area or community nagari. Not a few of the people who depend on living to fulfill their daily needs by becoming entrepreneurs. But the problem is that so far the role of stakeholders in advancing entrepreneurship in the regions has not been in line with the ideals of national development. So far, the government as a
regulator tends to play alone in carrying out its programs and in accordance with the observations made by the author so far, the programs provided are not in accordance with the needs of the community in increasing entrepreneurship. Often the programs given are only temporary programs and end when the project ends and the result is that people in rural areas or nagari perceive all government programs as temporary assistance and do not have a long-term orientation. Another thing is also seen from the contribution of universities, so far there have been many universities that have contributed to regional / nagari development but have not been structured and directed, each academician has their own program and is only a temporary program so that it has no long-term impact and its achievement cannot be achieved measurable.

In fact, the three actors (triple helix) in development must synergize with each other, so far in formulating policies and programs in development in higher education areas they are not included so that the programs tend to overlap and are not on target even though the community is waiting for polish and guidance from academics, as one of the actors helping the government in running its government.

The Triple Helix model offers a useful perspective for analyzing the role of collaboration between different social stakeholders in promoting local and regional conditions for the development of knowledge-based entrepreneurship [5]. The main assumption of the Triple Helix model is that the interaction between universities, government and industry, whose roles overlap in part, improve the conditions for innovation [6]. Triple Helix and other derived models can be applied at different scales and types of innovation, ranging from incremental to more fundamental innovations and make them good analytical tools for understanding the dynamics of knowledge-based development in rural areas [7].

Another phenomenon in the field is not as simple as what we know and observe so far. The number of entrepreneurs is actually very large, which can be said to be a natural resource which is actually the power possessed by this nation but sometimes the government and entrepreneurs pay less attention to the psychology of beginner entrepreneurs, especially in rural areas (new entrepreneurs). Entrepreneurs have tended to pressure small / novice entrepreneurs with inhuman prices or distribution of goods so that they cannot compete in setting prices and eventually new entrepreneurs will die. Should a businessman be able to make a beginner entrepreneur as a mutually beneficial adopted child.

Many of the advantages of novice / small entrepreneurship have been neglected so far because many programs that have not touched the root of the problems faced by entrepreneurs / small businesses have been carried out by both entrepreneurs and the government.

The problem above is actually not a simple problem if we can look at it from several points of view because, however, the existence of human resources greatly affects the success of entrepreneurs and the government. However, in the past few years, even though there have been many policies and efforts made by the government such as the establishment of the (Joint Business Group) launched by the Ministry of Social Affairs, it cannot be said to be successful because the increase in production and productivity is still insufficient and not proportional to the demand or target, which has been prepared.

The fundamental thing is why the government does not call or involve academics who are experts in their fields to help develop community businesses into entrepreneurs, so that many existing Joint Business Group do not work and even tend to die. What about the existing technology, sometimes this has made policy makers less aware of this need. A new entrepreneur is actually a person who has a strong interest in creating products and also in maintaining the unique / local values of their respective regions, which are their strengths, but the problem is that the use of technology is lacking in harmony with the increase in product values that have been wrong. one that is very important to be an entrepreneur.

According to Leydesdorff [8] considers, however, that expanding the role of the Triple Helix model must be done step by step because it contributes to development. The dimensions arranged so far allow to get explanatory power so that the problems faced in a development creation can be carried out. The role in the triple helix is no longer something new, but in its implementation it still needs support from all parties. In the Indonesian context, the collaboration of the three actors must be able to do because there are so many problems that arise because of the malfunctioning of the triple helix. Each actor seems to have his own interests, thus ignoring other contributions. So that the final goal is not achieved, we see today why in the development of a region it is not carried out gradually, even the government as the regulator tends to lose direction in prioritizing development [9].

Regardless of the number of actors involved, the model created can be conceptualized in terms of the role of each component of the actor, the relationship or link that is built between the actors and their function in the system [10]. This link or interaction has been measured in a number of ways, including the number of citations to academic papers produced by industry and the participation of academics in industrial research activities. Various university research grants provided by industry or government include the creation of academic spin-offs [11]. Regarding functions, universities are responsible for new production, industry generates wealth and government is responsible for legislative control [10]. However, the potential for innovation does not come from the institutional space of each of the actors composing Helix, but from the overlapping fields that result from their interactions [10]. These things and phenomena still occur today.

To answer this, creating a triple helix-based entrepreneurial development model in rural areas needs to be created so that the functions of each are clear and the steps carried out by the village are also clear. The question is, why are the government, academics and entrepreneurs unable to unite in advancing development, the problem of what happens in synergizing the three actors, and the extent to which the triple helix contributes
to entrepreneurship in rural / nagari. This question will always be a question if we are unable to find the answer. This research is one of the solutions offered to answer this question.

II. LITERATURE REVIEW

A. Triple Helix Perspective

Triple Helix is an analytical model developed by Kim et al. [11] that describes and explains the dynamics of institutional arrangements among universities, industry and government agencies, with the common goal of creating an innovative environment for the development of a knowledge-based economy. The development of the helix has always been ongoing. Proposed Etzkowitz and Leydesdorff [12], a fourth helix can be added to the model, representing culture-based publics, civil society and arts-based innovation. The fifth helix extends the model with the Quadruple Helix name by emphasizing the natural environment of the community [12]. But in the basic context that builds this helix or actor, the basis of the Triple Helix must be fulfilled so that only work harder to become a part or involve the next helix.

Regarding functions, universities are responsible for new production, industry generates wealth and government is responsible for legislative control [10]. However, the potential for innovation comes not from the institutional space of each of the Helix constituent actors, but from the overlapping fields that result from their interactions [10]. This approach to the role of institutional stakeholders is considered a potential source for innovation and entrepreneurial ecosystem growth, which is very important for regional economic development and social transformation [13].

Less research-intensive areas are increasingly recognizing that knowledge applied to local resources can promote economic and social development, so knowledge-generating institutions will be especially important in this context [14]. Previous studies have shown that higher education institutions can have a major impact on knowledge-based development in rural and peripheral areas [15].

The dynamics of learning are considered important in the entrepreneurial ecosystem [16]. Regarding the role of government, research shows that public policies support entrepreneurship and, in particular, overcoming knowledge and competency gaps, is very important to develop rural micro and small enterprises that are capable of creating employment, reduce poverty, mitigate depopulation and contributing to economic growth [17].

The role of industry in Triple Helix is mainly to generate knowledge money but can also participate in innovation and regional development by supporting entrepreneurship through corporate social responsibility (CSR) programs. Companies, both voluntary and the result of government agreements [18]. Although empirical analysis of the interaction effects of Triple Helix stakeholders is limited, several studies have been conducted, focusing on several outputs, such as the formation of companies in the form of SMEs in villages [11], local innovation projects [13] and entrepreneurial innovation performance [18]. However, previous research ignored the perceived subjective effect of the helical relationship, which is defined from the entrepreneur's perspective, which states that entrepreneurs expect more profit from creating new entrepreneurs [19].

B. Rural Entrepreneurship

The institutional approach to defining rural areas focuses primarily on criteria such as population size, density and geographic area [20]. In the academic literature, there is a lack of consensus on definitions. In fact, rural can be defined as a different type of locality but can also be approached subjectively, as a social representation, a way of life that can mean different things to different people, and as a dynamic entrepreneurial resource [21].

Some literature shows broader agreement on the challenges and opportunities of the rural context. In some rural and peripheral communities, employment relies primarily on natural resources, particularly agriculture, which have undergone structural adjustments and major markets, resulting in job losses and increased dependence on welfare transfers [22]. On the other hand, research on rural entrepreneurship, although limited [23], has shown that rural environments offer natural conditions and opportunities in which rural businesses can prosper [24].

New opportunities have also emerged, stemming from increased demand for more sustainable types of tourism and recreation, as well as quality products from the light manufacturing sector [25]. Rural areas also offer conditions for developing a cultural economy, such as local food, handicrafts, folklore, art, historical sites, landscapes, flora and fauna, which can be converted into resources for entrepreneurs [26].

Based on the nature and objectives of the entrepreneurial and entrepreneurial project, Mead and Liedholm [27] distinguish two types of entrepreneurial ideal in rural areas: rural entrepreneurship and rural entrepreneurship. In the first, the spatial context is that location takes priority, among other things, to develop business and earn profits. As for the second, there is an intense involvement of entrepreneurs with the place. Profits are also a goal to be met, but the project is closely tied to its place and resources. Hence, rural entrepreneurship makes sense in a certain place, because entrepreneurs intend to explore natural resources, not only for personal gain but also for regional interests. Craftsmen, local culture and rural tourism entrepreneurial activities, as such can find rich breeding grounds in such local contexts.

The concepts of culture, countryside and tourism are multidimensional and interrelated, referring to traditions, heritage, arts, lifestyles, places and community values that are preserved from generation to generation and which can be experienced by tourists seeking opportunities for recreation and to learn [28]. Skills are also part of this integrated experience, by assimilating these social practices into the cultural landscape [29]. Craftsmen are people with special skills for
manual production, who can make meaningful products from simple materials [30]. They are cultural entrepreneurs who use local culture and traditions in a number of activities, such as food and pastries, textiles, ceramics, baskets, leather, cosmetics and natural jewellery [31].

More established entrepreneurial and family business initiatives are playing an important role in the development of rural and less-favoured communities. They contribute to the long-term sustainability of the economic sectors of these communities, create jobs and help reduce poverty [32]. Entrepreneurs stimulate local tourism, which is recognized as having a central role in rural development and revitalization [33]. The entrepreneurial creative industry, particularly arts and crafts, is seen as an important rural resource, capable of restructuring local economic and cultural life [34].

In facing the benefits of rural areas that are recognized as an entrepreneurial environment, it is very important to enable the birth and development of small businesses in these areas, so as to achieve local competitiveness [35]. In this context, cultural and economic development must be considered together and in balance, in order to create a knowledge economy connected to social inclusion and cultural policies [34]. Developing a knowledge-based economy in rural and less favoured areas is particularly challenging, though, because businesses may lack the resources for innovation and the public sector may struggle with other basic public services [7]. However, favourable conditions for achieving these objectives can be created when different stakeholders are involved and work together in the form of a triple helix.

III. METHODOLOGY

The research objective was to determine the entrepreneurial perceptions of triple helix incorporation in rural development. This research was conducted qualitatively and also refers to previous qualitative research on the triple helix (for example [5,19]). This research also refers to research on the theoretical perception of entrepreneurship [36].

This study interviewed 20 respondents consisting of 14 entrepreneurs from 2 industries, 4 academics and 2 from the government. Purposive sampling is commonly used in qualitative research when the researcher knows the population, namely the three actors who have very high knowledge compared to others in getting a picture in the program [37].

The research location involved 4 areas where the research cases were carried out. The study consisted of 4 districts in West Sumatra and included 8 rural areas involved. This research case will reveal the triple helix of businesses that are in rural tourism areas. The results of interviews, observations and focus group discussion (FGD) will be analyzed in descriptive form and linked with the aim of the triple helix with the Minang ethnic entrepreneur. Research was conducted from 2019 to 2020 and produced an accurate conclusion from the research conducted.

IV. RESULTS AND DISCUSSION

This section will present the results of interviews conducted with respondents from entrepreneurs, government, industry and academia in seeing the existence of a business opportunity in the region to develop tourism. The most respondents are entrepreneurs who are obtained in the region and contribute to entrepreneurial development, especially in the case of rural tourism. The model that will be described in this study as a basic concept is shown in Figure 1.

![Triple helix](image)

Fig. 1. Triple helix.

A. Government

The government involved here is the tourism sector and the cooperatives and SMEs sector. The tourism sector because the area wants to develop tourism in the area seen from the existing potential. In the field of Cooperatives and SMEs (small and medium enterprises) because to be able to develop tourism, a supporting or supporting business is needed, so the entrepreneurial sector can be one of the supporting businesses for tourism.

There are 3 cases in areas that have the same problems and discussions, namely in tourism development, namely the Nagari III Koto area, Tanah Datar Regency, Tungkal Selatan Village, Pariaman City, Nagari Sintoga, Padang Pariaman Regency. The government as a regulator of both the tourism sector and the SME sector does not have the same view in developing the area. These fields operate independently in setting priorities so that for five years there has been no progress in advancing the region. The tourism sector only views tourism from the aspect of community development but it is not complete, there is no program in sustainable development. So that the tourism area does not develop and recently the community no longer hopes from the community and asks the private sector to build. As a result, the community is not involved in development because the private sector is asked to build both physically and non-physically so that the private sector does not feel obliged to develop the surrounding community because the priority is profit or profit.

The role of the Koperasi and SME offices is not visible because the community is also not involved in planning. If there is a program that is only temporary and not sustainable, so there is no similarity between the needs of the community and what the government is doing. In this case, in developing tourism, the role of the SME sector is not visible because the
development of tourism areas is left to the private sector so that people have no place in their own areas in developing their entrepreneurial skills.

B. Academics

Academics so far have not been involved by the government in making programs and also in implementing programs. Academics carry out their obligations in helping the community according to their needs but not based on the priorities of government programs. Academics immediately take the field and do it themselves according to the fields and problems faced by society.

This resulted in programs that were not implemented in the community because the programs for the community from the government were not in accordance with the needs. For example, in increasing the entrepreneurial skills of the community in this tourism destination. The community needs service training, how to be able to serve guests, ethics in dealing with guests when visiting and this is not included in the government’s priorities so that people behave far from what is expected by consumers or tourism visitors. This has always been done by academics with limited financial capacity because everything is carried out by the government as a regulator. So that some of the weaknesses found in this area are:

- The community is generally not ready to develop their area into a tourist visit area and as a result all elements in the service cannot be created and eventually the area is unable to develop.
- The economic life of the community does not have an impact on the tourist visits in the area.
- The level of economic life of the community does not increase even though they have assets, namely tourist areas which can actually be income for the community.

Some of these problems are fundamental problems concluded by academics because academics are very limited in their ability, especially those related to finance because academics are only able to provide thought and service in the context of community service.

C. Industry

The existing industry enters the area, namely the tourism industry but is unable to carry out the role as expected. So far, the industry tends to carry out profit-oriented activities so that what is done for the community in the tourist area is not visible.

Industry or entrepreneurial thinking in helping to develop the region did not meet any bright spots because what was expected of the three triple helix actors was not seen in this case. The industry has tended to employ people for a fee in the form of compensation but very little for fostering and also very little long-term investment with the community.

According to the results of research conducted by rural entrepreneurs, they see that the programs launched by actors are not able to be properly realized, even not in accordance with the needs of rural entrepreneurs in business development. Existing businesses are more likely to fit in with the momentary conditions thought of by rural entrepreneurs. There is not much that can be developed from the efforts of the village community because they only think about it themselves, while the government provides more programs only according to government owners.

In facing this, many rural entrepreneurs in their regional development are only guided by temporary needs so that there is no sustainable development in their area. If today people need foods that are light and easy to consume and that is the only thing that is always being developed and in fact the food is not developed and eventually it will die by itself. Seeing this, it can be interpreted that indeed the actors are not running accordingly, needs and are not interconnected.

The government in this case only focuses on the programs that it thinks of and is also unable to partner with industry in accommodating the aspirations of entrepreneurs in rural areas. It is as if the industry prefers to wait rather than pick up any suitable programs to be developed in these rural areas. The industry can actually provide guidance to businesses in rural areas so that it is faster to achieve progress and this is very much in line with the objectives of the triple helix. But in reality it is just waiting, there is nothing pro-active in creating new products. The real innovation in rural entrepreneurs is not able to develop properly because they only think for themselves and there is no polish from the industry so that it has taken a long time to develop and in general many have died before being able to develop more widely.

If we look at the conditions or triple helix research in an international context, it has changed considerably. This is tailored to the needs of the business development objectives in view of the Triple helix. Like previous research conducted Hasche et al. [38] in Sweden, it is not only the current triple helix that is said by actors who contribute to increasing development or the economy but it can be made into a Quadruple helix. Where the community or consumers also very much determine collaboration in extending the role of the triple helix as previously planned [39]. The community as those who see, feel and even consume from policies made by three actors so far are only spectators and users of a collaborative policy and do not take part in determining and also do not participate in contributing in determining policies, even though consumers are people. Who really feel the direct effect of a policy or rule.

Another view of the quadruple helix [40] is still being debated, the fourth actor in determining the quadruple helix has problems. This condition really depends on the hopes and goals desired. If we want to see innovation, then the fourth actor is the driving force of innovation itself, but other things experience a dead end because users or those who have the effect of related innovation only want to consume but not necessarily want to give an opinion on the benefits that are
enjoyed. Furthermore, Arnkil et al. [40] revealed that the users of innovation in their research are very close to the quadruple helix because it is very useful for SMEs, both in developing countries and in developed countries. It is also very important for us to undertake a strengthening exploration for SMEs in Indonesia especially in developing countries.

V. CONCLUSION

Collaboration between triple helix actors in rural development did not go according to expectations so that rural entrepreneurial development was unable to develop. The industry, which is expected to accommodate the innovations made by entrepreneurs in rural areas, turns out to only see daja and does not provide much contribution. Meanwhile, the government only runs its programs according to its wishes without being able to accommodate the aspirations of the community so that many wrong programs do not even match the needs of entrepreneurial development in rural development. The limitations of this research are only carried out on three actors and the next actor, for example, consumers or users of production products have not been involved. In this study, SMEs or Minang ethnic entrepreneurs are actors involved in the triple helix but also as quadruple helix, which is the fourth actor who is the actor of innovation in their research are very close to the quadruple helix, and the next actor, for example, consumers or users of production products have not been involved.

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