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**LOCAL COMMUNITY INSTITUTIONS FOR SUSTAINABLE CREATIVE AND
PRODUCTIVE ENTERPRISES IN THE BORDER REGION OF INDONESIA
- TIMOR LESTE IN BELU DISTRICT**

Paulus C.A.

Department of Aquatic Resource Management, Faculty of Marine Science and Fisheries,
Nusa Cendana University, Indonesia

Pellokila M.R.

Faculty of Agriculture, Nusa Cendana University, Indonesia

Azmanajaya E.

Polytechnic State of Balikpapan, Indonesia

*E-mail: chatepaulus@staf.undana.ac.id

ABSTRACT

Belu is one of the border districts in East Nusa Tenggara, generally the border area of the Republic of Indonesia is still categorized as underdeveloped area, the condition covers a very wide area with the potential of untapped natural resources optimally. Institutions are major components in local economic development, especially in developing creative and productive economic activities in the border region. This study aims to map the role of institutions in such activities in Belu using interpretative structural modeling. The results indicate that universities/polytechnics will play a major role in the first phase of development, followed by the community cooperative, community enterprises and non-governmental organizations (NGOs). If this policy strategy well implemented, then the creative and productive business development for coastal communities in the Belu district will also be likely to be succeeding.

KEY WORDS

Local community, sustainable enterprises, border region, Belu.

One of the key elements in rural development, especially in coastal areas, is the capacity of local institution to develop creative and productive economic activities. This is a challenging issue since the capacity human resources in coastal villages are lacking. Hence, in order to assist local institution to enhance their capacity, a set of systematic policy framework is needed. Such a policy framework could then be used to develop creative and productive activities by identifying key enabling conditions for such activities.

Figure 1 – Map of Belu district (Source: Modified from Google map, 2018 and Bappeda Belu, 2016)

Developing a systematic policy framework, however, is not a “one directional” process, rather it is two ways process involving all stakeholders of coastal communities. Therefore, an analysis of developing such a framework is needed. This study aims to address the lack of systematic approach in identifying key elements of creative and productive economic activities in Belu district, East Nusa Tenggara. The ISM or Interpretative Structural Modeling was used in this study to determine key elements for creative and productive activities.

Urgency of this research is carried out on the border region between the Republic of Indonesia and the Republic Democratic of Timor Leste, where through the current government policy to encourage the development of border areas in accordance with one of the nine priority programs (Nawacita), namely “building Indonesia from the periphery”. Therefore, to support the implementation of the policy, it would require more comprehensive research related to all aspects of society in the state border, thus providing direction to determine measurable development programs and have an impact on improving the welfare of border communities.

METHODS OF RESEARCH

The study is carried out using both primary and secondary data. Primary data were obtained from discussions, questionnaires, interviews, and field surveys by respondents, experts and communities in the study area, while secondary data obtained from several sources of literature and documents from several institutions associated with the research.

Interpretative Structural Modeling (ISM). This research uses system approach with Interpretative Structural Modeling (ISM) method. This method can be used to assist a group, in identifying the contextual relationships between sub elements of each element that make up a system based on ideas / determinants in a complex problem (Saxena et al., 1992).

Figure 2 – Identification Steps of Relationships between Sub-elements in ISM Analysis (Marimin, 2004)

Several categories of structures and categories of ideas that reflect contextual relationships between elements can be developed using ISM, such as influence structures (eg “sub elements E_i affect the appearance of sub elements E_j ”), priority structures (eg “sub elements E_i more priority than sub elements E_j ”), or category of ideas (eg sub elements E_i

has the same category as sub elements Ej) (Kanungo and Bhatnagar, 2002). This matrix is the result of expert perceptions to the contextual relationship between the elements or between the sub-elements. Four kinds of symbols to present the type of relationship are: symbols "V", "A", "X", and "O":

- The V symbol expresses a predetermined contextual relationship between the elements Ei to Ej, but not vice versa;
- Symbol A to express a contextual relationship that has been set between the elements Ej to the element Ei, but not vice versa;
- Symbol X to state the contextual relationship that has been set in reciprocity between elements Ei with elements Ej;
- The O symbol denotes the absence of a predefined contextual relationship between the elements Ei and Ej.

The identification steps of relationships between sub elements in a complex system with ISM method are presented in Figure 2.

RESULTS AND DISCUSSION

Local Community Institutions for Sustainable Creative and Productive Enterprises in Belu District. Paulus *et al.*, 2017b stated that 12 institutions are influential in productive and creative enterprises in outer island of Rote namely regency government, related agencies, banking, university, foreign investor, company partner, village government, related ministry, and markets. The similarity between Rote and Belu is the same as the border region of Indonesia with other countries, but in its development has an institutional model that is different from one another. Belu border areas not only directly adjacent to the land but also in water (Figure 1).

According to the Belu regional planning and development agency (Bappeda Belu, 2016), the model of economic development in the border region focuses on four local economic areas centered on the livestock, agriculture, ecotourism and capture fisheries sectors as the economic strengthening of the border communities in Belu. Based on discussions with key informants in the field, there are 10 institutions involved in the development of sustainable creative and productive enterprises in Belu. The ten institutions stated by the opinion of experts have an important role in the economic development of the border in Belu currently. Table 1 presents their respective institutions and roles in the economic development of the border in Belu.

Table 1 – Institutional and its role in economic development in Belu district

No	Institutions	Roles
11	Universities / Polytechnics	developing innovation and appropriate technology finding an economic model based on border communities pioneered the business incubator business based on a tested economic model conduct training and assistance for the community
12	Community cooperatives	providing the production facilities and capital
13	Community enterprises	entrepreneurial drive among the community and serves as a forum for gathering the producers accommodate the meeting of prospective buyers and sellers in exchanging information about expected product quality cooperating with universities or other partners in knowledge management, innovation of product quality, technological developments during the industrial revolution 4.0, as well as variations in product and market segmentation
14	NGO's	assist regional governments in realizing regional work programs supervise the public interest carry out assistance to the community according to their authority
15	Related agencies	function in marketing that is to bring market access closer to the community helping the community to fulfill raw material access disseminate and facilitate information and technological knowledge to the public improving product competitiveness supporting and participating village government implement the work program

16	Village government	planning and implementing programs targeted rural village development establishing village-owned enterprises or known as BUMDes to accommodate village funds from the central government empowering the community to increase output / production, such as: improving the quality and frequency of counseling, mentoring activities, information dissemination, community institution empowerment carry out the supervisory function of the program from the central and district governments
17	Company partners	establish mutually beneficial and sustainable cooperation invest business capital ensure price stability of goods produced by the community
18	Markets	play a role in marketing the production of the community in a sustainable manner guarantee the certainty of the price of the goods produced open export opportunities to neighboring countries support community activities from the secondary sector such as service and processing industries
19	District government of Belu	planning, implementation and operational control in accordance with the spatial planning district / provincial / national increase the capacity of border communities carrying out activities in accordance border economic management authority
110	Related ministry	formulating general policy related to local economic development in border facilitating the development of infrastructure expansion of information and telecommunications networks developing cooperation with neighboring countries

The contextual relationships of the institutional elements in table 1 are assessed and compiled into structural self-interactional matrix (SSIM). Revised results from SSIM according to transitivity rules resulted from reachability matrix ratings. The interpretation of results reachability matrix element load institutions DP-D (driver power-dependence) relationship. Contextual relations of each institution are presented in reachability matrix form in Table 2.

Table 2 – Reachability matrix based on contextual relationships from each institution

Sub-Element ei	Sub-Element ej										Driver Power	Rank
	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10		
I1	1	1	1	1	1	1	1	1	1	1	10	1
I2	0	1	1	0	1	1	1	1	1	1	8	2
I3	0	1	1	1	1	1	1	1	1	0	8	2
I4	1	1	0	1	1	1	0	1	1	1	8	2
I5	0	1	1	0	1	1	0	1	1	0	6	3
I6	0	1	1	0	0	1	1	1	1	0	6	3
I7	0	1	1	0	1	1	1	0	0	0	5	4
I8	0	1	1	0	0	1	0	1	1	0	5	4
I9	0	1	1	0	0	1	0	0	1	0	4	5
I10	0	1	0	1	0	0	0	0	0	1	3	6
Dependency	2	10	8	4	6	9	5	7	8	4	63	

Table 2 shows that the highest power driver or key element that is the actor who plays a major role in encouraging the running of sustainable creative and productive enterprises in the Belu border area are universities /polytechnics (I1). The sub-element of actors with great thrust at number two is community cooperatives (I2), community enterprises (I3), and non-governmental organizations (I4).

Belu stores a lot of natural resources such as fisheries, agriculture, plantations, livestock, and tourism. However, the utilization of the potential of this area by the community is not optimal due to the condition of the community does not have the skills, experience, knowledge, and motivation in exploring the potential of the region. This situation happened a long time but there is no good business in private, public, and government to change the behavior pattern with a willingness to exploit the potential of the region optimally (Siregar, 2014).

Existence of innovation in the technology incubator is crucial, because it affects the development and perpetuation. The touch of innovation aims to increase the added value and competitiveness of a product. Jamaran (2009) states that innovation is one of four factors that determine the success of developing an incubator in addition to the readiness of incubators, capital, and technological understanding (know-how). Budiharsono (2010) also stated that the development of agribusiness-based technology incubators urgently needed appropriate innovation support. Rogers and Shoemaker (1971) interprets innovation as an idea, practice, or object that can be perceived as something new by an individual or the targeted community outreach activities. This understanding is in line with the definition put forward by Osu (1996) which states that innovation can be defined as behavior, thoughts or new things because it is qualitatively different from the forms that have existed before. Hanafi (1987) mentions that innovation is an idea, action or goods that are considered new by a person with the novelty value of a degree of subjectivity, while according to van den Ban and Hawkins (1999) innovation is an idea, method, or object that is considered to be new although not always the result of the latest research. Lestari et al. (2001) defines innovation as an idea, practice, or object that is considered new by an individual or other unit of the user. Rajalahti (2009) emphasizes that innovation refers to the process of creating and placing something into a combination of the use of knowledge from various sources, which may be new but usually comes from a combination of previously existing knowledge.

Finally, technology-based business incubators can be used as media for universities/polytechnics to accelerate the transfer process to users and broader use of innovation by users. The user referred to in this case is the Belu community both in the form of community cooperatives and community enterprises. NGOs are expected to act as facilitators or extension agents in strengthening community capacity in the formed business incubators.

Figure 3 – Hierarchy structure elements of the sustainable creative and productive enterprises in Belu district

Structuring the actor element in Figure 3 shows that the universities/ polytechnics are at the highest level, phase 1, which means that the ongoing productive and creative business in the border region of Indonesia - Timor Leste is largely determined by the presence of universities/polytechnics that facilitate and encourage all actors in business institutions. In phase 2, the three actors namely community cooperatives, community enterprises and

NGO's gave the sense that the technology-based business incubator that has been set up in phase 1 can continue with the willingness of cooperation of the three actors in phase 2.

In phase 3 there are related agencies and village government, this means that the involvement of these two actors in encouraging the running of the business will influence other communities to participate in the pattern of developing business incubators pioneered in phase 1. Phase 4 is the marketing phase, the actors in this phase are the company partners and the market. Both of these actors are responsible for cooperation and marketing at the regional, national and even international levels. This phase is very important for the development of business in Belu.

The final phase, phase 5 and phase 6, is a policy-making phase at the national and international levels and is responsible for the economic development of the border with neighboring countries and competition for export-quality products. Both district government of Belu and related ministries in the central government will collaborate in developing business incubators into a large and highly competitive industry.

Figure 4 – Institutions Matrix of Driver Power - Dependence in Belu district

Figure 4 presents a map of the sector classification based on the contextual relationships in the reachability matrix table. Autonomous sector has the characteristics of weak sectors and weak power driver dependent variables. Related ministry is the only actor present in this sector. The low dependence on other institutions reflected in this sector indicates that the ministry's position cannot touch directly on the preparation of rural business incubators; this is corroborated by the low power drivers of the ministry to other institutions.

There are 21 ministries involved in economic development efforts of the border region of Belu: (1) Ministry of National Development Planning/Bappenas, (2) Coordinating Ministry for Maritime Affairs, (3) Ministry of Transportation, (4) Ministry of Maritime Affairs and Fisheries, (5) Ministry of Tourism, (6) Ministry of Internal Affairs, (7) Ministry of Foreign Affairs, (8) Coordinating Ministry for Economic Affairs, (9) Ministry of Finance, (10) Ministry of State-Owned Enterprises, (11) Ministry of cooperatives and SMEs, (12) Ministry of Industry, (13) Ministry of Trade, (14) Ministry of Agriculture, (15) Ministry of Labor, (16) Ministry for Public Works and Human Settlements, (17) Ministry of Environment and Forestry, (18) Ministry of Agrarian and Spatial Planning, (19) Coordinating Ministry of Human Development and Culture, (20) Ministry of Technology Research and Higher Education, and (21) Ministry of Rural, Rural Development and Transmigration. Efforts to involve many parties, in the process will not be easy. Coordination and synchronization between parties especially with

other ministries is an important key to realizing well, including convincing local governments to provide supporting policies. Coordination and synchronization concerns not only the program but also support funding, so it does not overlap. Solutions that can be offered include, among others, the design of cooperation must involve various parties.

The ministry's work focus is acceleration of economic development of border regions should be done as soon as possible, so that the economic gap with the neighboring countries can be reduced. Acceleration is done through convenience instruments or customs incentives, infrastructure development in the broadest sense; so that investment more easily entered. The government needs to immediately establish a special economic zone (KEK) against the border area. The focus of ministry work that is no less important is improving the quality of social and cultural life of border communities through entrepreneurship learning process of all human resources (government, community and private sector) so that they can participate in development towards the formation of civil society and carry out the functions of good governance.

The district government of Belu is in the dependent sector, this means that the driver power of this institution are very low in realizing sustainable creative and productive enterprises in Belu, even relying heavily on the involvement of other actors.

Universities / Polytechnics and NGOs are in the independent sector. both of these actors have high power drivers towards sustainable creative and productive enterprises with a low level of dependence on other actors in carrying out these activities. Their great mobility and a low dependency on the system, the involvement of these two actors will encourage the involvement of other actors in creating sustainable creative and productive in Belu. The role of university is very important, especially in the *tridharma* (tripe duties of University) aspect of teaching, research and community service in the development process and can affect changes in society. In its implementation, the participation of universities with experience in the field of community empowerment and development of resource potentials, is needed as facilitator and mediator for development of access and cooperation in developing coastal and coastal potential for community welfare (Paulus *et al.*, 2017b).

Six sub-elements of actors in the linkage sector are community cooperatives, community enterprises, related agencies, village governments, company partners, and markets. The sub elements in this sector have great driver power over the success of the program but have a great dependence on other institutions. These actors together depend heavily on involvement with one another which means that if other actors have involved themselves in encouraging the running of sustainable creative and productive enterprises, the district government of Belu will involve itself. Siagian (2003:108), "Rural development is the whole process of a series of efforts undertaken within the village environment with the aim of improving the living standards of rural communities and enhancing the welfare of the village". Paulus *et al.*, 2017a stated the three main elements that need attention for the success of village development are:

- Community participation in development;
- The emergence of new ideas within the community regarding the future of their lives;
- Applied appropriate technology and labor intensive.

However, any action against the institution's sub elements will affect the success of the sustainability creative and productive enterprises development program and vice versa if the sub-element is getting less attention, it can affect the failure of this program.

CONCLUSION

Institutions that play a key role in encouraging success from Sustainable Creative and Productive Enterprises in the Border Region of Indonesia - Timor Leste are universities / polytechnics. Universities / polytechnics together with NGO's play a very important role in encouraging the running of this program in phase 1 with very strong driver power and a low level of dependence on the system. The other actors who also have a high driving force to encourage the running of sustainable creative and productive enterprises in a row are community cooperatives and community enterprises. Community cooperatives and

community enterprises are in the linkage sector together depending on the system and the involvement of other institutions such as, related agencies, village governments, company partners, and markets. The participation of the six actors in the linkage sector will encourage the involvement of the dictatorship of Belu in the sustainable creative and productive enterprises program by itself. Thus, cooperation is the key to the success of this program, therefore it is expected that all parties involved can provide sharing, not only program and policy support but also funding in accordance with the duties and functions of each institution.

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