



**Endogenous
variables and the
influence they have
on the
sustainability and
competitiveness of
regional seaweed
industries in
Indonesia**

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A critical review of the existing literature regarding regional economic development and endogenous growth; and empirical results from local seaweed industries in Indonesia.

**(The regional
and
endogenous
growth of
Baubau,
Sulawesi)**

Faculty of Economics and Business

**Msc Business Administration: Change
Management**

1st Supervisor: Dr. B.J.W. Pennink

2nd Supervisor: Prof. Dr. L. Karsten

External Supervisors:

Dr. W. Laseur *University of Groningen*

Dr. Ir. J. Siswanto *Institute of Technology in Bandung*

Dr. A. Budihardjo *Prasetiya Mulya Business School in Jakarta*



ABSTRACT

The goal of this thesis was to find out which factors are influencing the regional and economic development in Baubau, mainly focusing on the Indonesian seaweed market. For this research seventeen interviews were conducted with seaweed farmers, local buyers and sellers, and governmental and educational institutions. First, this research will look at the current market conditions and resource endowments with regard to the Indonesian and regional seaweed market. The region of Baubau is one of the poorest areas in Indonesia. Fishing and seaweed cultivation are one of the main sources of income in this region. Second, the focus will be on the Indonesian and local government and educational system and what influence these factors have on the economic development in the region. The Indonesian government is currently in a process of decentralization. Therefore, the relationship between the central and local government has to be strong. Third, the amount of skills and knowledge of the people that are active in the seaweed industry will be highlighted, especially looking at entrepreneurial and leadership skills. To further develop the region there has to be sufficient educational opportunities for the local community. Fourth, the option of forming a cooperation between the relevant parties in the seaweed industry will be investigated. There are a lot of different parties that have an influence on the development of this region. A collaboration on a closer level can have a positive influence on the endogenous growth in the region. Finally, this thesis is concluded by discussing the theoretical but above all, practical implications of the research.



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INTRODUCTION

Today's literature on Change Management is mainly focused on organisations and institutions operating in the Western world. This world is characterized by countries that have a growing economy and a stable government. In this literature little is said about organisations that are operating in Third World countries. In addition, this literature is also more interested in changes that happen in and between national and international companies. Factors like management and leadership are popular when looking at current literature. But besides looking at factors that influence national and international companies, there is not a great amount of literature about change management with regard to the development and growth of cities and regions in Third World countries.

In Third World countries, like Indonesia, change management is a very important issue. In these countries there is a stronger focus on the development of a region or city itself, instead of a focus on the development of one company. That is why the focus of this research will be on the growth and development of a region, namely Baubau. The region of Baubau is located in Sulawesi, a province in Indonesia. Its main industries are fishery and seaweed cultivation and a large amount of the people that live in that area is involved and dependable of these industries. The focus of this research will be on endogenous growth.



Endogenous means¹:

- having an internal cause or origin;
- not attributable to any external or environmental factors;

¹ Google Dictionary 2010 version 2.0



- confined within a group or society.

In other words, it is important to keep in mind that the growth and development processes in the region of Baubau, originates throughout the activities of the groups or societies on this island. In order for a region to become a sustainable and profitable region, everybody has to understand that this will be a long-term objective. The best way to achieve this objective is by using a *proactive strategy*, with a focus on development, instead of a *reactive strategy*, with a focus on adjusting to changing circumstances. (Stimson et al., 2009)

First, the article of Stimson et al. (2009) will be used to highlight important factors that influence regional development. According to them resources and market conditions, leadership, entrepreneurship and institutional factors are the main factors that influence the process of regional ‘endogenous’ growth and development. Stimson et al. (2009) also try to model and measure the impacts of leadership on regional growth and development.

In the second part this research is going to look at additional theories with regard to regional endogenous growth in Third World countries. The impact of skills and knowledge and the role of training and education are going to be highlighted, especially looking at the development of the Southeast Asian seaweed and fisheries industry. In recent literature the role of cooperations between government agencies, educational institutions and local communities has also been brought to the attention. According to the authors of these articles there are a lot of factors that play an important role in the development of cooperations. In this part of the research a revised model of Stimson et al. (2009) will also be presented. Their model will be modified and expanded with two additional variables: “Skills and Knowledge” and “Human Coordination”.

In the third part of this research all these relevant factors will be investigated looking at the Indonesian seaweed market, especially focusing on the region of Baubau. More specifically, this report will create an overview of these endogenous factors and the influence that they have on regional economic development. This research will be finalized by presenting a conclusion, discussion and recommendation

Research objective

Create an overview of the Indonesian seaweed market and find out the effects that regional endogenous factors (institutions, cooperations, and the level of skills and knowledge of the local community) have on the sustainability, development and competitiveness of the Baubau-region.



Research questions

Which regional endogenous factors influence the sustainability, development and competitiveness of the Indonesian seaweed market?

Sub-questions

- What are the current market conditions and resource endowments on the Indonesian and regional seaweed market?
- What is the influence of governmental and educational institutions on the regional endogenous growth of the Indonesian and regional seaweed market?
- What is the influence of the level of skills and knowledge of the community on the regional endogenous growth of the Indonesian and regional seaweed market?
- What will the influence of cooperations be on the regional endogenous growth of the Indonesian and regional seaweed market?



THEORY: Model of Stimson et al. (2009)

Stimson et al. (2009) mention that there are two different streams of theory that characterize today's literature on economic growth theory. The first stream is the *traditional neoclassical economic growth theory*, which is primarily based on the basic factors of production, namely the capital stock and the labour force. Other important aspects are internal growth, export base and economies of scale. In other words, this entails the quantitative aspects regarding economic growth. The second stream is the *new growth theory*, which makes a distinction between endogenous and exogenous factors. The term endogenous implies that economic growth is influenced by the use of 'investment resources' generated by the economy itself, in contradiction to the reference made to exogenous factors.

According to Stimson et al. (2009), institutional and organizational structures play an important role in the development of endogenous growth conditions. Three main actors in that development of human resources are:

- Governmental agencies;
- Educational institutions;
- Innovative firms and entrepreneurs.

Stimson et al. (2009) try to model and measure the impacts of leadership on regional growth and development. The model that they use is mentioned on the next page². According to them there are four relevant variables with regard to regional endogenous growth and development, these four variables are *Resource Endowments and Market Fit* (quasi-independent variables), *Leadership*, *Entrepreneurship* and *Institutions* (intervening variables). The first variable is *quasi-independent* because it states the current condition that a region's economy is in, and it is seen as a given. The other three *intervening* variables are, according to the authors, the main variables that influence the endogenous development of the region. All the four variables will now be shortly explained.

Resource endowments and market fit

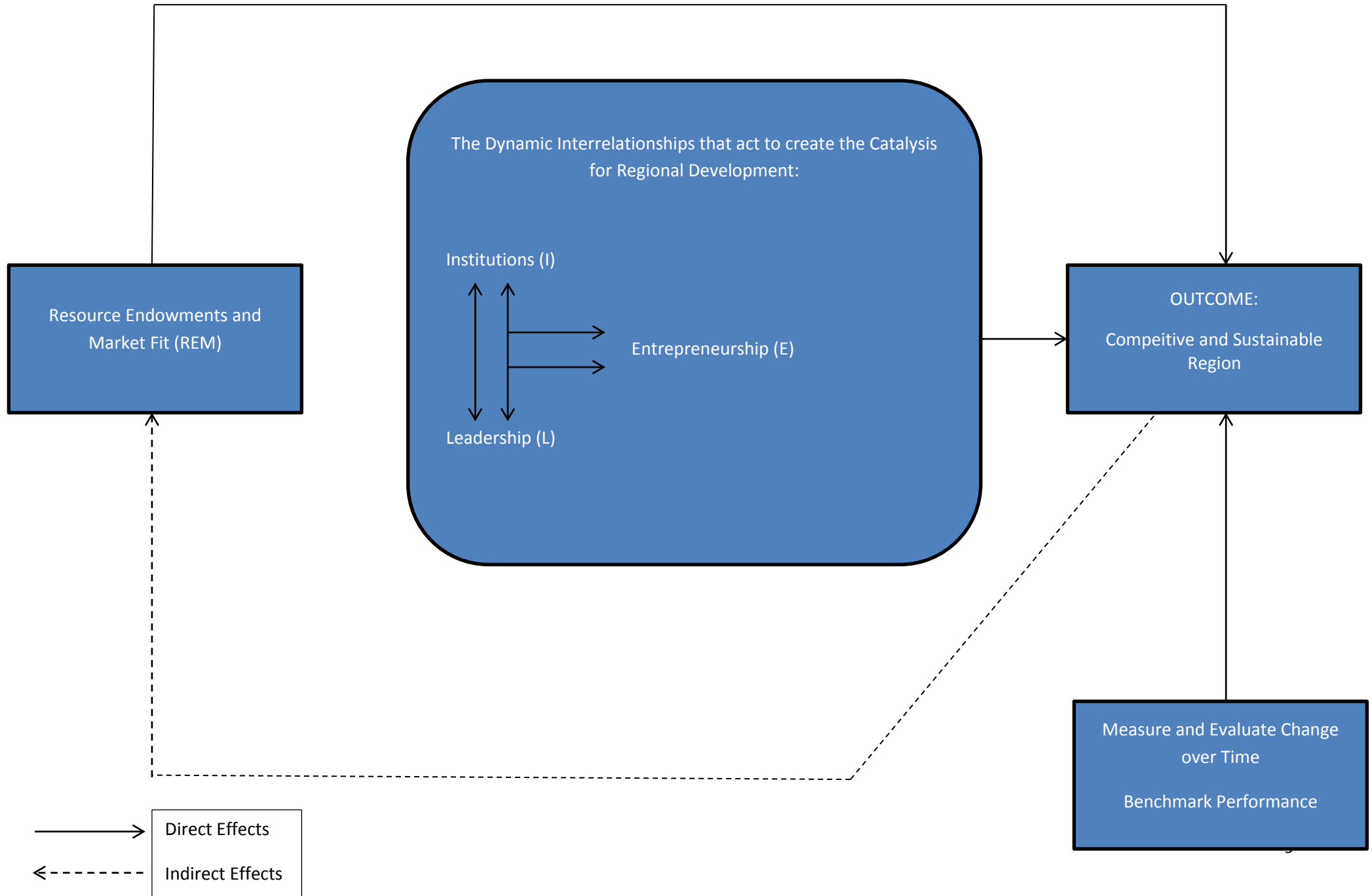
The first dimension of the model used for this research is 'resource endowments and market fit'. For an economy to grow and perform well it, first of all, has to have sufficient resources. A second important aspect is the market fit that a region has with respect to the current market conditions. It is also important see that the capacity of local leaders to act and the

² The model is too big to fit on this page. The model is not a direct copy but an imitation of it that I made myself.

Quasi-Independent Variables

Intervening Variables

Dependent Variables





capacity of institutions to be effective is highly dependent on the resources that are available to them. But this is also the case the other way around. The more effective and efficient the leadership and institutions in a certain region, the better a region can act to increase its pool of resources and its capacity to serve current market conditions. A region has a market fit when it can effectively compete with other regions to capture market share outside and also inside a certain region.

Leadership

According to Stimson et al. (2009) leadership is a difficult term to define. There is no ideal concept for being or becoming a good leader, especially not when you look at regional economic development. In addition, the amount of research regarding leadership in regional economic development and the nature of this leadership are scarce. When looking at companies with excelling performance, leadership can be defined in terms of a person. But for regional economic development this is different. In this case good leadership can be seen as an expression or a result of the collective action of a society or a group of people. For regions to adjust to continuous changing circumstances, and thus be flexible and possess sufficient knowledge, it is important to collaborate and create collective processes. That is why they see a strong connection between institutions and leadership. According to them, conditions that are important in these circumstances are:

- Shared power;
- Flexibility;
- Entrepreneurialism.

According to Stimson et al. (2009), community leadership with regard to regional endogenous growth has a strong linkage with entrepreneurship. They state that the desire of individual entrepreneurs “to collaborate – to work together – to create positive externalities beyond their own self-interest or profit is what generates and/or enhances effective leadership in a collective context for regional economic development”. They also mention that it is important that there is a strong linkage between leadership and institutional considerations. In their words, “Collaboration, trust, power distance and entrepreneurialism are products or outcomes of the interactions between leadership and institutions.”

In addition, Stimson et al. (2006) state that:

“Leadership for regional economic development will not be based on traditional hierarchy relationships; rather, it will be a collaborative relationship between institutional actors encompassing the public, private and community sectors – and it will be based on mutual trust and cooperation.”



In their article, Stimson et al. (2009) propose five key components/preconditions for effective leadership to enhance the economic development process in a region. These are:

- Collaboration;
- Trust;
- Shared power;
- Flexibility;
- Entrepreneurialism.

Entrepreneurship

According to Stimson et al. (2009) many authors use the terms leader and entrepreneur as synonymous. They state that both share the same characteristics as risk bearing, initiative, determination, vision, etc., but they cannot be seen as the same. According to them: “Acting on their own, entrepreneurs can advance products and industries and can be leaders within their range. However, as the world becomes more integrated and interdependencies assume increasing importance, a separation of leadership and entrepreneurs becomes more apparent, especially when we are talking about carrying or taking individual economic success (at a business level) to the more complex level of the development of a region as a whole.”

Institutions and institutional factors

According to Stimson et al. (2009), institutions and institutional factors contain a wide variety of issues with regard to governance and government. They also mention that it not only concerns the public sector but also the private sector, NGOs, community actors and structures. These institutional factors provide the rule structures and the organizations within a society for it to operate. The functioning of these factors can have a big influence on how efficient and effective a society operates and on the competitiveness of these regional and national economies.

Stimson et al. (2009) also mention that the effectiveness of local governance is closely linked to leadership (especially leadership turnover), weak or ineffectual leadership and inconsistencies and incoherence between the elected officials and politicians and a region’s or country’s bureaucracy. In addition, uncertainty can also be created by a lack of clear political goals and unclear divisions of tasks between stakeholders and actors. This uncertainty (accompanied with a short-term focus) often results in increasing transaction and a region or city that is less competitive.

Conclusion

According to Stimson et al. (2009), the four above mentioned variables are the most relevant with regard to regional endogenous growth and development. First, a region has to have sufficient



resources in order for it to grow and develop; and the current market has to fit with the expectations of the main industries in the Indonesian fisheries and seaweed market. Resource endowments and market fit have a significant influence on how leaders act and on the effectiveness of institutions, and also the other way around. Second, it is important that there are people present that will stand up and act as strong leaders. However, it is still hard to define what good leadership is, especially with regard to Third World countries. In Western countries leaders can be defined in terms of a person, but in Third World countries good leadership is often a form of collective action. Third, strong leaders also have to be entrepreneurial, and also the other way around. Entrepreneurship and leadership are not synonymous. They both share a lot of the same characteristics, but they cannot be seen as the same. Fourth, institutions cover a wide variety of issues with regard to governance and government. The functioning of these factors can have a big influence on leadership and on how a region develops.

Stimson et al. (2009) mention these four variables as being crucial for the development and growth of a region. Of course there is wide-covered support for this theory, but it seems that this model does not cover all relevant variables with regard to regional endogenous development. After doing research it became clear that not only these four variables play an important role, also other variables play an important part with regard to this subject. This research will look at the effects these four variables have on the endogenous development and growth in the region of Baubau, and it will also look at other variables that might be important with regard to this subject. These variables will be mentioned in the Methods-section.



METHODOLOGY

This research can be split in two tracks. The first track will describe theoretical concepts with regard to regional economic and endogenous growth. The second track is the empirical research conducted in Indonesia. For the empirical part of this research, semi-structured interviews were used for the main data collection. Doing qualitative research has one big advantage because there is room for flexibility in answering the questions and the way issues are addressed. No specific script was used to conduct the interviews. The interviews consist of a set of information based objectives (subcategories). Each interview was conducted in a different manner, based on educational or social background. For the interview 44 questions were asked divided into 10 different subcategories related to the model used by Stimson et al. (2009)³:

- Role of local government;
- *Skills and Knowledge (additional variable)*;
- Firms' strategies;
- Leadership styles;
- Leadership in the region;
- Rule structures;
- Turnover;
- Entrepreneurship;
- *Human Coordination (additional variable)*;
- Region's resources.

The two additional variables, *Skills and Knowledge* and *Human Coordination*, were added before conducting the empirical research. After studying the literature of Stimson et al. (2009) and additional literature with regard to regional development, it seems that these factors play an important role with regard to the performance of the other variables. In addition, the influence of skills and knowledge in forming a cooperation will be explained. In the next section of this research there will be an elaboration of these additional variables.

Selection of Region

A sample of 18 people has been interviewed from different social backgrounds and areas in the community (i.e. educational, governmental and agricultural). Interviews with the seaweed farmers were conducted in the three main seaweed farming areas on Baubau and Wakatobi. The

³ A copy of the whole list of interview questions can be found in Appendix 1 on page 40.



villages that were visited are Palabusa and Sulaa (on Baubau) and Wangi Wangi⁴ (on Wakatobi). Permissions for the interviews were asked from the local government officials. These local government officials also helped with the transportation to the relevant areas in Baubau and Wakatobi. Interviews with educational and governmental institutions were also conducted on the island of Java, more specifically in the cities of Jakarta, Bandung and Yogyakarta⁵. The largest part of the people that were interviewed has a direct or indirect relationship with the region of Baubau. A lot of people in Indonesia, especially in the somewhat poorer regions, like Baubau, cannot speak English. A translator was necessary during the interviews in order to understand what the respondents said. Sometimes a secondary translator was used because of the different dialects the people are speaking in the regions. The primary translator knew about the research topic of this paper and therefore had some knowledge about how to ask the questions and what kinds of answers were expected. The complete list of interview questions was also translated in Indonesian and a copy of the list was provided to each person interviewed.

⁴ A map of the whole region can be found in the introduction on page 5.

⁵ The complete list with all the interviewed persons can be found in Appendix 3 on page 70.



1ST TRACK: Theoretical Research

In the previous Methods-section two additional variables were mentioned. After studying relevant literature on the subject of regional endogenous growth it appeared that the model by Stimson et al. (2009) is incomplete. In this section two new variables will be introduced, *Skills and Knowledge* and *Cooperatives*. These variables can be seen as an addition to the model of Stimson et al. (2009). The variables and the corresponding literature will be further explained. The first variable, Skills and Knowledge, will be mentioned as first. This section is especially going to highlight the role skills and knowledge play on an individual level and on a collective level. Skills and knowledge on an individual level is about the development of one person. Skills and knowledge on a collective level is about co-management and cooperatives. These two terms will be used as synonyms, because co-management is about the process of becoming a cooperative.

Skills and knowledge

Endogenous growth entails that human assets also play an important role in the development of a region. Training and education are two crucial activities that influence the development of skills and knowledge from people. The model of Stimson et al. (2009) does not mention this variable separately. Instead, they consider that this variable is already present in a developmental region. However, additional literature suggests that this variable alone also plays a crucial part in the development of a region. For example, Smart (2005) mentions that when looking at the cultivation of seaweed, “training and education in alternative techniques could prompt greater efficiency and yield but would need to be put in place by GOs or NGOs”. The commercial cultivation of seaweed is also called “*phycoculture*” (Tseng & Borowitzka, 2003).

In eastern Indonesia there are already some programs that could facilitate seaweed cultivators better by teaching them new skills and knowledge and facilitate them access to capital. One of these programs is called PENZA (Program for Eastern Indonesia Small and Medium Enterprise Assistance) and he mentions that it will be possible for a region to become involved higher up in the value chain if the farming industry expanded sufficiently. (Smart, 2005).

Smart (2005) also mentions the built up of human and social assets in a “*phycoculture-economy*”. According to him a “*phycoculture economy* includes many people directly, as paid labourers and family members, farm owners, middlemen and traders with secondary involvement including suppliers of equipment, boats and onward transportation provision”. He adds to state that “*phycoculture* provides a cash economy which can help preserve human assets by curbing the migration of the young seeking incomes further afield. The involvement of outside organisations can develop skills and knowledge through education and research, and introduce new techniques to



make use of deeper unproductive areas, further developing the opportunity for diversification into this occupation.”

Skills and knowledge for a cooperation to work

For a cooperation to work it is important that the local actors that are involved in the process can be entrusted to manage their resources (Berkes, 1989). Therefore, it is firstly important that these local actors can manage themselves. Otherwise not much progress can be made in forming a cooperation. Second, it is also important that the local government will also cooperate in this process. According to Pomeroy (2001) government resource managers are often reluctant to share authority. This is not only to keep their own political power but also because these managers are somewhat sceptical about the capabilities of local-level management. So part of the responsibility for this collaboration to work lies in the hands of the local actors.

According to Pomeroy (2001), “managers’ reasons for scepticism include the local presence of appropriate knowledge on the part of the fishers, and the ability of fishers to organize themselves to manage for long-term sustainability.” He adds to this statement to say that “even in countries with high standards of education, it is true that fishers tend to have lower levels of education than the general population.”

Example 1 - The Philippines is one of the countries with the greatest numbers of fisheries with community-based management and cooperations. But one of the bigger problems, with regard to this type of management is that fishers have difficulty in organizing themselves for collective action. Pomeroy (2001) mentions that “in reviewing the Philippine projects, it was found that fishers often recognize that a problem exists, they will discuss the situation among themselves, and they will discuss possible solutions to the problem, but very few groups of fishers will take action to either formally organize themselves or to develop institutional arrangements (rights and rules).” His review (Pomeroy et al., 1999) also found that in less than 20 per cent of the cases that the fishers actually took action on their own and took initiative to organize and develop institutional arrangements.

Pomeroy (2001) concludes his statements about skills and knowledge to say that “information and education has proven to be an important intervention in assisting fishers to take collective action and cannot be divorced from the organizing work. Fisher-to-fisher transfer of knowledge and experience, from fishers who have benefited from collective action to those contemplating collective action, is a useful education method.”



Leadership

Pomeroy et al. (1998) mention two factors that are crucial for the success of co-management; these factors are leadership and incentives. They state that leadership is very important, “local leaders set an example for others to follow, set out courses of action, and provide energy and direction for the co-management process. Pomeroy’s research in 2001 adds to this to state that leadership is also one of the limiting factors to take collective action for fishers. He mentions that “no individual is willing to step forward to lead, there is no one in the community with enough credibility among the fishers to lead, or divisions within the community or group of resource users will not allow for a leader to emerge.” In addition, he mentions that “if enough initiative exists among the fishers they may approach a supportive politician and ask for assistance or they may contact an external change agent, such as a NGO, academic or research institution, to assist in community organizing and development of institutional arrangement.” Pomeroy (1998) also mentions that community leaders, like the Mayor of a city or region (“Bupati”), might not be the appropriate leaders for a co-management process. He continues with stating that a leader’s term of office is best to be limited. In this way there are also chances for others to gain leadership skills and it might reduce the possibility of corruption (Khan and Apu, 1998). In addition, Pomeroy et al. (1998) also mention that reliance on one individual to act as a leader can sometimes cause problems. According to them, “the external change agent must not act as a leader because the community will become dependent upon them. The community must develop local leadership itself. Training and education efforts must strive to build and develop leadership skills among a variety of individuals in the community so that the co-management activity does not become dependent on one person.”

According to Buhat (1994), forming a core group is strategic in identifying and developing leaders. The members of this core group can be drawn from committed individuals that consistently participate in the co-management process and who are concerned with sustainable resource management. Research (Pomeroy et al., 1996; Katon et al., 1997) has proven that leaders who are trained and recruited locally are a powerful force in mobilizing residents for collective endeavours, spearheading awareness campaigns and outreach efforts, and motivating stakeholders to take action.

Incentives

The second factor influencing the co-management process is incentives. Pomeroy et al. (1998), state that a process for co-management often involves giving up individual short-term benefits in exchange for real and perceived longer-term benefits. Pomeroy (2001) elaborated on the subject of incentives with mentioning that “an incentive, whether economic, social and/or political, must be present, recognized and agreed upon by the fishers. The incentive must exist at both the individual and group levels. There must be an inherent strategic benefit and advantage to engage in



the new arrangement. The incentive cannot be imposed from outside but must be internally generated.” An appropriate incentive structure is very important. Pomeroy et al. (1998) state for example that “for a poor fisher with a family to feed, the incentive structure to support and participate in co-management must be clear and large. Risk is involved for the individual in changing management strategy.” A way to see if an incentive structure really works in a community is when the members of a community invest resources (labour, money) in their own project.

Example 2 - According to a review of projects in the Philippines (Pomeroy et al., 1996), project failure occurred most frequently when fishers did not perceive the same incentive for change as did the project implementers. “Positive cultural attitudes toward efficacy of collective action were consistently related to perceptions of positive change resulting from the project.” In 1998 Pomeroy et al. elaborated on this factor.

Economic incentives are usually best for individuals in the system, like a higher income, food availability and protection of livelihoods. Economic incentives can also be important for resource stakeholders, such as seaweed traders and processing factories, because they are dependent on a fixed supply of seaweed products. And also for communities, who are currently performing other activities than seaweed cultivation, economic incentives can be important, for example resort owners, dive tour operators and managers of tourist-related businesses, the preservation of coastal ecosystems and the maintenance of clean coastal waters. These communities have a direct bearing on the earnings they derive from different communities who patronize their businesses (Pomeroy et al., 1998).

Human coordination

According to Orogo (1994) forming a cooperation between the local community with the governmental and educational institutions can be very convenient and “will provide and generate economic and business activities for the community and cooperative”. He mentions that when small communities are working together in a good manner it will create economic strength and advantages by using organisation, training and shared equipment. Eley (2006) also mentions that “community level participation is essential to ensure that the new laws and legislations of the fishery are followed”. He add to state that “the danger of imposing a management regime is that the community will cause a degradation of lifestyle, nutrition and/or income” and that “such an impact will almost certainly cause a loss of trust and willingness to cooperate from the fisher folk of the respective community and compromise the acceptance of the policies endorsed”.



Smart (2005) also mentions a case of a cooperative of seaweed farmers and fishermen that was set-up but eventually failed because of a lack of funding and grants from GOs and NGOs. This cooperative hoped to acquire money and equipment but they never received a response on their application. According to Baticados (2004), one of the main issues regarding the success of a cooperative is economic benefits and they only form if “the sustainability of their livelihood is seriously threatened”. Baticados (2004) also mentions that economic benefits are not the only issue for success. Cooperatives should also be “used as a source of information to protect and promote long-term sustainability through management of their resources” and they should become an important part of the local management system by utilizing their organizations skills “taking into account the socioeconomic and cultural needs of the community”.

Pomeroy (1995) also mentions that according to recent research on the management of coastal fisheries in Southeast Asia and around the world that when communities of fishers are left to their own devices they can, under certain conditions regulate access and enforce rules through social practices and community institutions and, consequently, use fisheries resources sustainably. He also adds to this statement that these informal and traditional management systems can be ineffective and inequitable but national governments are still failing to develop an adequate complement or substitute to these management systems and that several government efforts in fisheries management in a lot of Southeast Asian countries have been poor. According to him fisheries management should not only be a governmental function. However, in most countries there is almost no role for fishers or fisher organizations in the planning and management process.

One of the main problems, according to Dey and Kanagaratnam (2007), with regard to the management of fisheries is that it is still done in a centralized and top-down manner “focusing on objectives relating to fish resources and based exclusively on formal biological science (Viswanathan et al., 2003) and mostly disregards the experiences of fishers (Degnbol, 2003)”. Nielsen et al. (2004) also mention that “fisheries management as it has developed with the modern rationality of industrialised societies (modern fisheries management) does not represent a solution either. This centralised (top-down) fisheries management, focusing on objectives relating to the fish resources and based exclusively on formal biological science is increasingly questioned in the societies in which it was developed. Attempts to introduce such management in other environments have generally been without much success. Such management systems are inherently unable to address the present problems of fishing communities due to the ways objectives are defined, limitations in the knowledge on which they are based and the top-down nature of implementation.”



According to Pomeroy (1995), there is a “growing realization of the need for increased participation by resource users in fisheries management and greater localized control over access to the resources can be seen in a wide range of policies and programs throughout the Southeast Asia region”. He concludes this statement by mentioning that in almost all cases the future of community-based resource management “seems to lie in a form of co-management, a sharing of responsibility and authority for resource management between the government and the local resource users/community”. In his 2001 article, Pomeroy proposed figure 1 as a model for the co-management of fisheries:

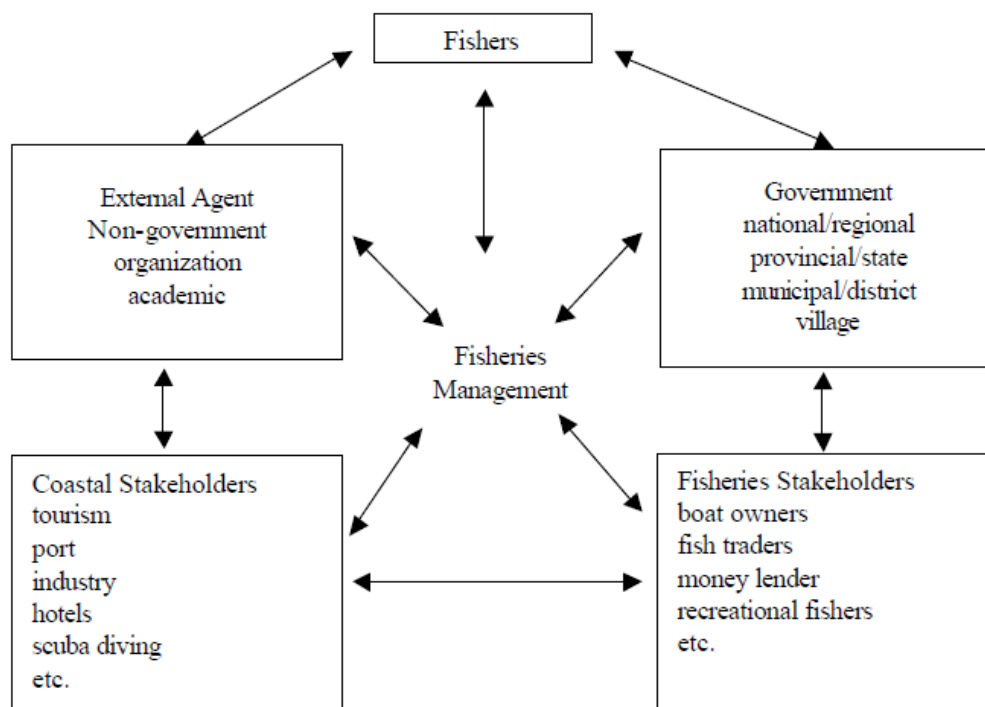


Figure 1: Fisheries co-management is a partnership

According to Pomeroy (2001), “needs and demands within the small-scale fisheries sector also differ across regions and no single management solution can be appropriate for all cases”. So, the process of co-management has to be seen as a process of resource management, constantly adjusting and maturing to changing conditions with involvement of aspects like democratization, power sharing, social empowerment and decentralization. He adds to state that “co-management is not a regulatory technique but a flexible management strategy in which a forum or structure for action on participation, rulemaking, conflict management, power sharing, leadership, dialogue, decision-making, knowledge generation and sharing, learning, and development among resource users, stakeholders and government is provided and maintained. Partnerships are pursued, strengthened and redefined at different times during the co-management process depending on the



existing policies and legal environment, the political support of government for community-based actions and initiatives, and the capacities of community organizations to become government partners.” Looking at the statement mentioned above, the process of co-management can be a long-term, costly and complex endeavour.

Advantages of co-management

According to Viswanathan et al. (2003) and Pomeroy (2001), the potential advantages of community participation in management of fisheries include equity and efficiency. When communities are participating in management it is more economical in terms of enforcement and administration than a centralized system. Community participation also entails a form of self-management, because the fishers will have responsibility for several management functions. In this way the community can develop a management strategy that meets local needs and conditions more and are in their eyes more legitimate because members of local communities understand their needs, opportunities and problems better than a random outsider. Co-management can also avoid the problem of cultural differences, because when the local communities are involved in the process they will support and respect each other’s culture more. The participation of local communities in the introduction and improvement of management strategies can also reduce the amount of social conflict and maintain or improve social cohesion in the community.

Example 3 - A good example of a sustainable and successful community management program can be seen in the Line Islands (Luxton and Luxton, 1999), where a state owned corporation, ASC (Atoll Seaweed Company), invested money and trained local people to set-up their own farms and cultivated seaweed for the commercial market. The ASC purchased all the grown seaweed by the farmers and later sold it on the international market. By training and educating the people through community management the program became a self-funding co-operative that could provide for a sustainable livelihood for the community involved.

Example 4 - Another example of a successful co-management program is mentioned by Cahill (2005). In his article he mentions a project called JCPP (Jagna Community Partnering Project) and it consists of four subprojects. One of these projects has also been initiated in Baubau and the main aim of this project is “to develop group livelihood projects using the resources and skills already available within the community”. Cahill (2005) uses as example a subproject that was initiated in the Philippines in collaboration with the local government. The staffs of the projects were responsible for providing guidance on the action research component of the project. Cahill (2005) states that, “to facilitate collaboration between the implementing agencies, one worker from each organisation was employed on a full-time basis to initiate the project. The three agencies shared equal responsibilities



for decisions about the daily management and overall methodology of the project.” Cahill (2005) adds to say that the projects, so far, are a success but according to him “each group has still a long journey ahead in terms of formalising their business structure, securing grants or loans to improve production and sustaining relationships between the NGOs and government departments”. According to him “the groups will still need on-going support from project workers for at least five years to conduct further training, monitoring and conflict mediation”.

Decentralization and co-management

“Decentralization refers to the systematic and rational dispersal of power, authority and responsibility from the central government to lower of local level institutions – to states or provinces in the case of federal countries, for example, and then further down to regional and local governments, or even to community associations.” (Pomeroy, 2001)

Indonesia is a country with a lot of diverse customs, cultures, coastal communities and resources. It has a three-tier government system: central, provincial and local (districts and cities). Siri (2006) mentions that Indonesia is currently entering the *Reformasi* era that started in 1999. This era has brought new models for the management of Indonesian coastal zones. According to Siri (2006), “coastal zone management in Indonesia is entering a new phase as a result of two new laws (Laws 22 and 25/1999, which then revised as Law 32 and 33/2004)”. The contents of these laws emphasize on the government’s decentralization process and are enhancing the role of the community in the management of resources. More specifically, these laws change the hierarchical relationship between the local and the provincial government. Siri (2006) comments that “the local governments, both *kota and kabupaten* (cities and districts), have become autonomous and are no longer obliged to hierarchy report to the provincial government”. So in other words, these laws give more power and authority to the local governments to manage their own resources in the most sustainable way.

According to Pomeroy (2005), more and more governments are committed to implement programs and policies of community-based resource management and decentralization, especially in Southeast Asia. According to him these programs cannot be implemented in isolation because the planning and implementation of these programs requires “the development of new legal, administrative and institutional arrangements to complement contemporary political, economic, social and cultural structures”. Co-management is necessary for the implementation of these programs. This means that the local fishermen will become part of the process and that they will be working in cooperatives with their own rights and responsibilities. Therefore it is necessary to face one of the biggest pitfalls with regard to this subject, because new institutional arrangement have to



be created that can sustain community participation and in a way that the poorer regions of a community benefit from this change in a sustainable manner (Dey and Kanagaratnam, 2007). This bottom-up approach of management will be the trend for the near future.

Example 5 - The World Fish Centre already experimented with the concept of co-management in the late 80's. These pilot activities were mainly focused on studying the delegation of management responsibility and authority between local-level institutions and the state-level institutions. The concept of co-management fitted as a sort middle ground between the state-level concerns in fisheries management for equity and efficiency, and the local-level concerns for active participation, self-governance and self-regulation. In 1996, the World Fish Centre began with a pilot of community participation, called the Community Based Fisheries Management (CBFM). This approach was somewhat different then the co-management concept. Co-management was more about the partnership between centralized government management systems with local institutions. CBFM tried to establish formal institutional arrangements at community level in collaboration with local NGOs and with the support of governmental institutions. This led to the establishment of community-led, women-led and fisher-led community based organisations for the management of fisheries. This CBFM approach differs from the co-management approach on the level of participation of government and the stage when this government becomes involved in the process. The CBFM approach is mainly focused on the establishment and empowerment of local-level institutions through community-focused approaches with little support from the government. The process of co-management not only focuses on these issues but also looks at the establishment of partnership arrangements between the local community, resource users (e.g. seaweed cultivators) and government institutions. (Dey and Kanagaratnam, 2007)

According to Pomeroy (1995), community-based management systems have a long history in Indonesia, but current national laws in Indonesia do not recognize local community management systems with regard to fisheries. These management systems have long been centralized in Indonesia. In 1994, a new program of poverty alleviation, called IDT (Inpres Desa Tertinggal, or in English: Presidential Instruction on the Less Developed Village) was developed. This program was aimed to promote the economic growth in farming and fishing villages by decentralizing and the active participation of local communities. In a lot of countries in Southeast Asia, including Indonesia, there is an increasing commitment of governments to decentralize policies and programs. This new form of management makes the fisher part of the management systems.

At the moment the Indonesian Ministry of Marine Affairs and Fisheries is in the process of enacting the *RUU Pesisir*. According to Siry (2006) the *RUU Pesisir* is going to play a central role with



regard the decentralization process because “it encourages local governments to manage their coastal zone, and recognizes local communities and traditional rights”. Three major topics are being addressed in this act (Ministry of Marine Affairs and Fisheries, 2002), namely:

- Developing a framework for coordination, integration, and consistency in management and planning decisions;
- Creating a voluntary, incentive-based program for local integrated coastal management at the city and district level;
- General provisions relating to administration and implementation, such as monitoring and evaluation, conflict resolution, and funding.

So, the *RUU Pesisir* is a vital step in the development of the decentralization process and this act will have a strategic role in this process. According to Siri (2006), this is because Indonesia has a limited amount of administrative resources and therefore not all marine and coastal management issues can be handled with the same degree of urgency. Siri (2006) adds to state that most of these issues occur at the local level and require solutions that are tailor-made. The devolution of responsibility and authority to local governments is therefore necessary for the management of the coastal zones in Indonesia.

New and expanded model

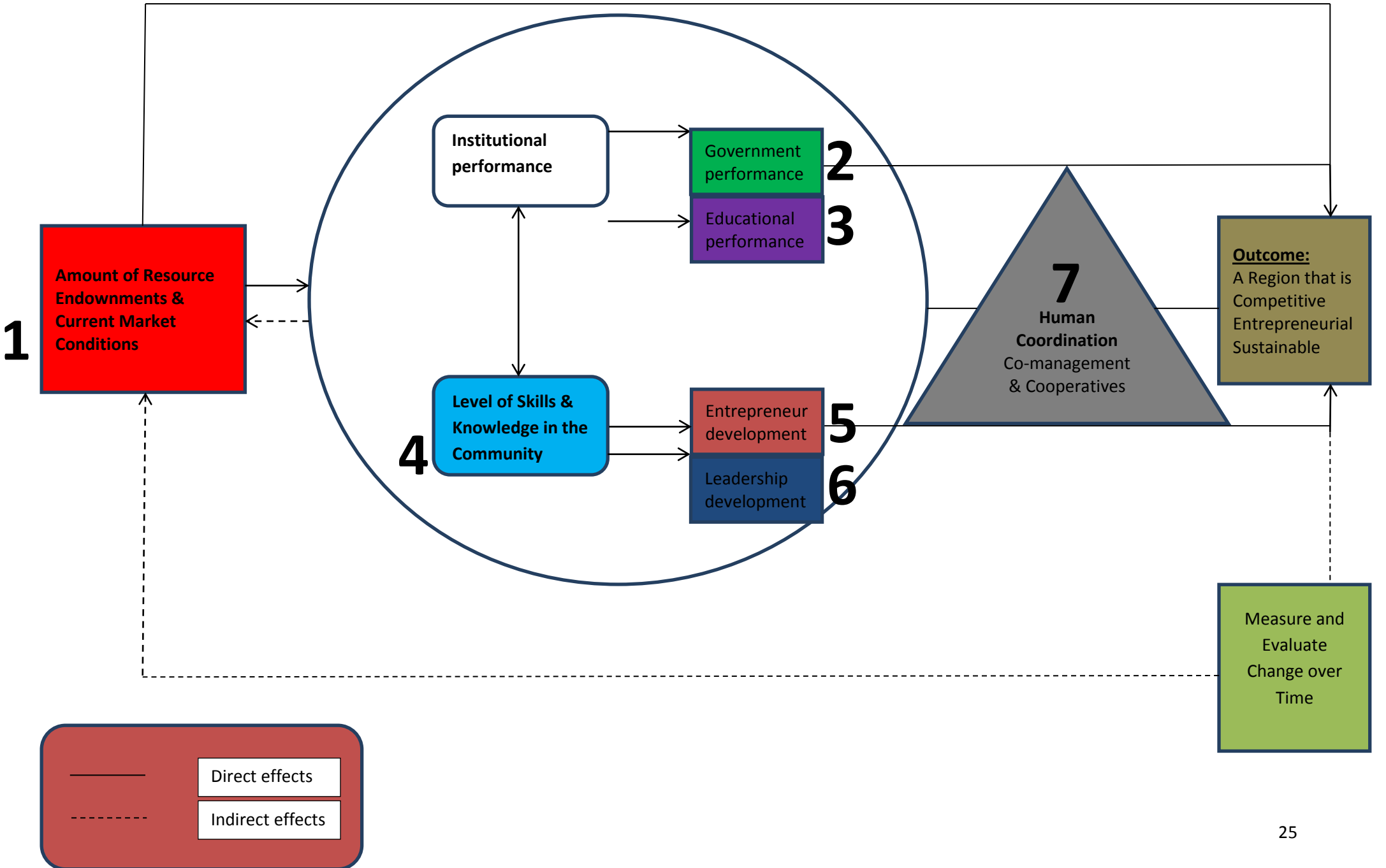
After presenting the two new additional variables for this research the original model used by Stimson et al. (2009) is modified and expanded. The presentation of the new model can be seen in on the next page⁶. The first change that is presented is that *Educational Performance* is added to the variable *Institutions*. The second change is that the variables *Entrepreneurship* and *Leadership* are both sub-variables of *Skills and Knowledge*. The third change is that the variable *Cooperations* is added to the model. The last change is that the variables, relevant to this research, are numbered in the model (no. 1-7). The numbers and additional colours of the variable-boxes in the new model are synchronized with the paragraphs of the Results part in the next section of this research. For understanding the new model it is convenient to look at the model before and after reading the paragraphs. In this way the impact that the variables have on becoming a competitive, sustainable and entrepreneurial region will be illustrated in the model.

⁶ The model is too big to fit on this page

Quasi Independent Variables

Intervening Variables

Dependent Variables





2ND TRACK: Empirical Research

In this section the second track will be described. The variables mentioned in the new and expanded model will be investigated in Indonesia. This will provide a quick view in the field of regional seaweed industries and variables that are related to the subject of regional development and endogenous growth. The results of this empirical research are mentioned below and they are summaries of the interviews that were conducted in Indonesia. The numbers of the paragraphs correspond with the numbers of the boxes mentioned in the model. In addition, the colours of the paragraph headers correspond with the colours of the boxes in the model⁷.

1. Market Conditions and Resource Endowments in Sulawesi

The standard of living in the region of Baubau is very low. Cultivating seaweed is a relative profitable business in comparison with other businesses. The biggest problem is that the people do not know this. Another problem is that they get extorted by local traders. The best way to fix these problems is to provide the local people with knowledge about seaweed cultivation and trading. An additional profit is that the quality of the seaweed will increase and, consequently, the prices of the seaweed will stabilize. The influence of China and Japan on this process is significant. At the moment, China and Japan are one of the main causes of the decrease of the seaweed quality because they import seaweed in large quantities without looking at its quality.⁸ The fluctuating price of seaweed is also an important concern with regard to the standard of living in Baubau. The minimum price that is set-up by the local government is much too low. The local government has to intervene more on this matter to improve the development in the region⁹. For an illustration of how this could be done, the local government has to look at their neighbours, the island of Muna. It is important that the local government of Baubau focuses its attention more on the situation in Muna because they are performing significantly better than Baubau in terms of production. However, Baubau is only focusing its attention on its own industry at the moment¹⁰.

In the region of Baubau there are two different types of seaweed cultivators: the dependent and independent cultivators. The current ratio in Baubau at the moment is 60/40. The local government has good ties with the bigger industries in Surabaya and Makassar. These industries also invest themselves in the region, like the warehouses. Both the dependent and the independent are supported by the local government. In addition, the local government is currently in the process of

⁷ The full body of empirical research can be found in Appendix 2 on page 45 and the list of interviewed persons can be found in Appendix 3 on page 70.

⁸ Interview with Mr Anggadiredja on page 44 and 45

⁹ Interview with the Mayor of Baubau on page 45

¹⁰ More information about Muna can be found in the empirical research in Appendix 2 on page 49.



establishing a seaweed processing industry in the region. This will give a big boost to the economy in the region and the local government has to be the “director” of this change.¹¹

Another issue Baubau is struggling with is that a lot of valuable (skilled) people leave the region to find a better job somewhere else. The local government has to look for more possibilities to keep these higher-educated people in the region. The local educational institutions also have a big influence on this matter. The local people should not get taught how to work for other companies but they should be educated in how to set-up their own businesses. In addition, greater women involvement in the local seaweed industry could develop more possibilities for the region.¹²

The current market conditions are quite positive but they need to be stabilized to further develop the region. The region of Baubau has sufficient resources for this to happen but it has to find a way to use their resources better. Therefore, human assets have to be trained and kept in the region.

2. Governmental Institutions in Sulawesi

Indonesia knows a long history of centralized power and strong hierarchies. However, at the moment the Indonesian government is in a state of decentralization. Indonesian legislation is being amended so that local government institutions can regulate and manage their own autonomous regions.¹³ Government institutions like the Bappenas and local Bappeda offices help governments decide and plan what there needs to be done to support the decentralization process (e.g. by making use of LERD teams)¹⁴. During the research it became clear that much of Indonesian legislation is still focused on national level issues. There is almost no legislation with regard to local industries, like the seaweed industries in regions like Baubau.

The relationship between the central and local government is one of the most important aspects is an important issue. At the moment the collaboration between both governments is not effective. To strengthen the relationship between both governments there is now a consensus to involve more local communities in the decision-making process. This will positively influence the position of the seaweed cultivators in Baubau. This is because in this way they will get more benefits from the production directly and they can get better support and facilitation from both governments.¹⁵

¹¹ Interview with Mr Eli, Mr Feto Daud and Mr Ali Hassan on page 46

¹² Interview with Kiky and the Mayor of Baubau on page 48

¹³ Interview with Kiky on page 49 and 50

¹⁴ More about the role of the Bappenas office and LERD teams can be found in the empirical research in Appendix 2 on page 51.

¹⁵ Interview with Guspika on page 52



In the past recent years the local government spent a lot of time and effort in improving the infrastructure in the region. This will attract more local and foreign investors because Baubau now has a better distribution network. The local government is also increasingly collaborating with South Korea. This will create more investment and recreational opportunities for the region and it will help to develop the region further.¹⁶

The local government does not support seaweed cultivators in a financial way; the only facilitation they receive is in terms of training and material. But this facilitation is not enough. People need to be encouraged to set-up their own businesses. The only way to do this is to train and educate these people.

3. Educational Institutions in Sulawesi

Educational performance is a variable that was not separately mentioned by Stimson et al. (2009) in their model. However, this seems to play a crucial role in the process of developing the region of Baubau. More and more educational institutions are showing an interest in this region and therefore a stronger collaboration with the local government is necessary. At the moment research is conducted in the region about improving the quality of seaweed. In addition, research has been done about how to influence people from different cultures and make them less resistant to change.¹⁷ All these developments will have a positive influence on the region. The central and local government still have to realize this. The amount of funding for research should also be increased to improve the quality of education in the region.

Educational performance in the region of Baubau itself is quite low at the moment and the quality of education is decreasing. Educational institutions from outside the regions are showing an increasing interest in the region. This is a positive development that should be encouraged more. For this to happen, educational institutions, the local government and the industries with its cultivators have to collaborate on a more intensive level.¹⁸

4. Skills and Knowledge in Sulawesi

The additional variables skills and knowledge have a direct relationship with human capital. In the region of Baubau human capital is sufficiently present. However, people have to be trained in order for them to develop and grow. This is what the region is lacking of at the moment, training and education. In order for this to happen, the people in the region should first be organized. Dealing with different cultures, norms and values are also an important aspect on this matter.

¹⁶ Interview with the Mayor of Baubau and Mr Suhufan on page 53

¹⁷ Interview with Mr Wahu and Mr Suhufan on page 56

¹⁸ Interview with the Mayor of Baubau and Kiki on page 56



Contradicting the expectations about local government support beforehand, there were already put in place a couple of courses and work programs that help the seaweed cultivators¹⁹. The local government also helps the seaweed cultivators with supplies, like ropes and nets. But what the local government does not do, is to help the seaweed cultivators financially. The local government's role on this matter is minimal. At the moment, they only set-up a minimum price for the seaweed crops and they recently improved the infrastructure in the region.

Corporate Social Responsibility (CSR) is a new form of funding that provides new possibilities for underdeveloped people with regard to training and education²⁰. One of the problems with CSR is that people and companies do not know what it is. This is an issue for the government, because they supervise on what happens with the CSR-assets. At the moment the local government does not know how to manage this. Another problem is that the concept of CSR has to be redefined. In other words, from which companies do we get money? How do we measure the effectiveness of CSR? And how can we improve the management of CSR?

In the original model of Stimson et al. (2009), Skills and Knowledge are not mentioned as a separate variable. However, as mentioned above, the training and education of human assets are one of the most important things with regard of the development of this region. In the original model, only Leadership and Entrepreneurship are mentioned as variables. These variables should, however, be mentioned as an issue related to a more holistic variable, namely Skills and Knowledge.

5. Entrepreneurship in Sulawesi

The term entrepreneurship and governmental institutions have a strong relationship when looking at the region of Baubau. The entrepreneurs in the region, in most cases, have worked or are still working for the government. Entrepreneurs play a very important role with regard to the seaweed industry in this region. They are often involved in the whole process; from the cultivation, production and collection of seaweed till the distribution and selling of the crops. One of their main activities is training and educating the cultivators.²¹ So entrepreneurs are also involved in the development of skills and knowledge of human assets.

Entrepreneurs not only give training, they also receive it. These training sessions are organized by the local government²². So, also the local government is involved in the development of entrepreneurship in the region. However, they are only involved in matters of training and education. Entrepreneurs do not get any form of financial support from the government. That is why

¹⁹ More information about courses and work programs can be found in Appendix 2 on pages 57 - 59.

²⁰ More information about CSR can be found in the full Empirical Research in Appendix 2 on page 59.

²¹ Interview with Mr Eli (Part II) on page 62

²² More information about the training for entrepreneurs can be found in Appendix 2 on page 63.



for this country and region to develop further it should also support entrepreneurs financially. In order for this to happen, the government should first establish a good definition of the word 'entrepreneur'. At the moment the government has trouble in organizing entrepreneurs because they often do not know which people to qualify for support. Therefore a clear definition of who qualifies as an entrepreneur is essential.²³

The variable Entrepreneurship is mentioned as one of the key variables in the original model of Stimson et al (2009). And indeed, entrepreneurship can have a very positive influence on the development of this region. At the moment, however, entrepreneurs do not have a big influence on the growth of this region. The main reason for this problem is that the government is supporting the wrong people. For a change to happen, the government should redefine their policy with regard to the support for local entrepreneurs.

6. Leadership in Sulawesi

In order for the region of Baubau to develop, it should establish a collaboration between the most relevant parties in the seaweed industry. For this collaboration to succeed, the region should have a strong leader. However, leadership is not one of the strongest skills the people in Indonesia have. Normally speaking, the Mayor (Bupati) of a region should be in charge, but the Bupati's influence on the region is currently too low. One of the problems is that the Bupati does not have a good connection with the local people. Another problem is that corruption also plays an important part with regard to the functioning of the local government.²⁴

The best leadership style that best suits the region should be democratic. However, as mentioned before in this research, the education level of the people in this region is low. Therefore, a large amount of people in the region are not capable of making a wise decision. That is why the leader of this region should serve the interests of these people in the best manner with a strong vision. The Bupati has to be this leader and he should not only have the interests of the government at heart, but more importantly, he should also listen to the people in the region.²⁵

As mentioned before, the local people are not able yet to handle a democratic leadership style. Consequently, it is better to maintain a top-down structure to implement changes in the region. At the moment the government is still in the process of involving more and more people in

²³ Interview with Mr Sasongko on page 63

²⁴ Interview with Mr Guspika on page 64

²⁵ Interview with Kiky on page 65



governing this country. This means that in the long-term this structure will become more flat. However, for the moment this top-down structure fits the situation best.²⁶

The term Leadership, just like Entrepreneurship, is also mentioned as a key variable in the original model of Stimson et al. (2009). And indeed, for the development of this region, a strong leader is very important. However, strong leaders are hard to come by in this country. That is why a strong leader should possess the right skills and knowledge to develop this region.

7. Human Coordination in Sulawesi

There are a lot of relevant parties (government, educational institutions, local buyers and sellers, the community, etc.) that influence the endogenous growth of the region of Baubau. In order to develop this region even further the possibility of forming a cooperative/collaboration between these parties can be very useful. The people within these parties are often already collaborating on some scale. For these parties to collaborate with each other, legislation has to be revised to structure this process better.²⁷

There are a lot of benefits when all these parties are working together, like reducing conflict, better distribution of information, and an easier acquisition of finance. At the moment, the local government is already engaged in the development of cooperatives and it is trying to further encourage and stimulate this process.²⁸

The option of forming a collaboration arose during this research. It became clear that a lot of parties are active with regard to the Indonesian seaweed industry. And in most cases, there was already some form of collaboration within these parties. Forming a collaboration between these parties should be the next step in developing this region further.

²⁶ Interview with Kiky on page 65

²⁷ Interview with the seaweed cultivators in Baubau and Mr Eli (Part I) and on page 65 and 66

²⁸ Interview with Kiky and Mr Eli (Part II) on page 66



CONCLUSION

The model on the next page shows the variables that influence regional endogenous growth and development according to this research. The black boxes in the model show the variables that were also mentioned in the model of Stimson et al. (2009). The white boxes show the additional variables that were added after performing this research.

The first box shows *the amount of resource endowments and market conditions*. The region of Baubau is one of the poorest areas in Indonesia. Fishing and seaweed cultivation are one of the main sources of income in this region. When looking at resource endowments, the research showed that the resources are already there, in terms of human capital and raw materials. A large amount of the people that live in this region has a very low level of skills and these people never had the opportunity to get a proper education. In other words, the amount of resources in the region is sufficient. The problem is that these resources are not managed properly.

The second box shows the *institutional performance* in the region. This variable was also in the original model of Stimson et al. (2009). However, in their theory they only mention institutional performance with regard to the government. This research showed that educational institutions also play an important part when looking at the development of the Baubau region. As mentioned before, there are sufficient human assets in this region. In order for them to develop they have to be educated and trained. Hence, adding the variable educational institutions to the original model. This research also showed the importance of a well-performing government, on central and local level. The Indonesian government is currently not performing well. To develop regions like Baubau, the central and local governments should perform better to support the process of decentralization.

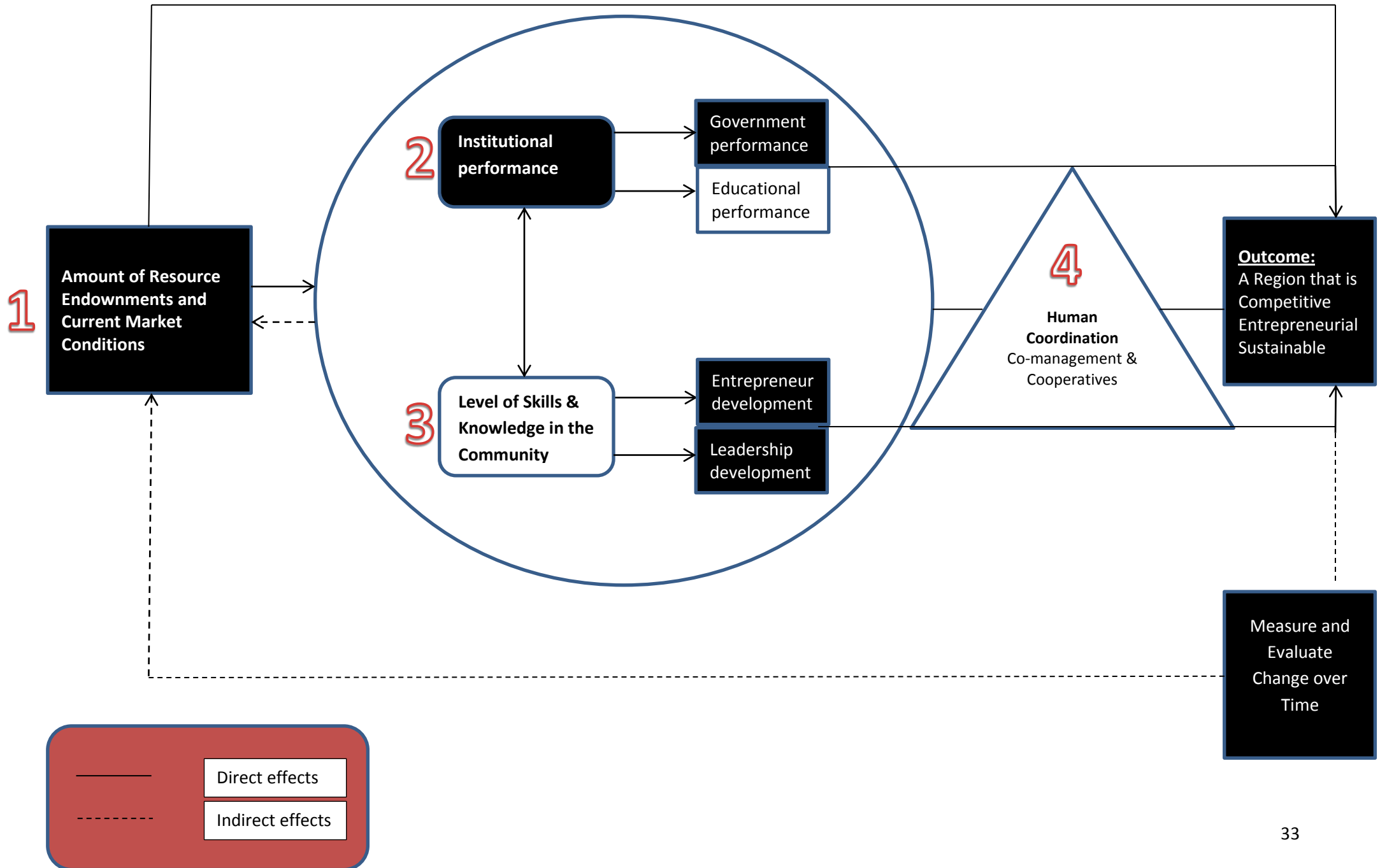
The third box shows the additional variable *level of skills and knowledge in the community*. This variable was not mentioned in the original model of Stimson et al. (2009). In their model the variables entrepreneurship and leadership play a crucial role in the process of regional endogenous development and growth. However, this research showed that these two variables have to be downplayed to the more holistic variable skills and knowledge. The variables leadership and entrepreneurship are part of the development of skills and knowledge in the community. The local communities have to get proper training and education to develop their own skills and knowledge. At the moment these people do not get sufficient opportunities to do this.

The fourth box shows the additional variable *community-based management and the development of seaweed cooperations*. In the original model of Stimson et al. (2009) this variable is not included. However, by developing seaweed cooperations and performing community-based

Quasi Independent Variables

Intervening Variables

Dependent Variables





management the most relevant parties with regard to the region's seaweed industry can collaborate on a closer level. This will create more involvement of local actors in the development process. The Indonesian government is currently in a process of decentralization. This process is still in its earlier stages. However, it can be seen as one of the first steps towards community-based management and the development of seaweed cooperations.

All together, the variables mentioned above play a crucial role in developing Baubau as a competitive, entrepreneurial and sustainable region. The whole process of getting the region to this outcome should be measured and evaluated on a regular basis. This means that it will be an on-going process where all variables should be checked constantly.

DISCUSSION

This research showed that not only quantitative economic factors (e.g., productivity, prices, and costs) are important for measuring regional development. Factors like human capital, skills and knowledge also have a significant influence on regional development. These qualitative (endogenous) factors are perceived as difficult to measure. When a region is able to effectively address these endogenous factors it will be more agile and rapid in responding to changing circumstances. In the modified model on the next page there is an illustration of which variables were significant for this research. The factors "Skills and Knowledge" and "Institutions" were used to measure the impact these factors have on the regional development in Baubau. The factor "Skills and Knowledge" was further divided in the sub-factors "Leadership" and "Entrepreneurship" and the factor "Institutions" was divided in the sub-factors "Government Institutions" and Educational Institutions". It is however extremely difficult to measure the effect these factors and sub-factors have on regional development. The revised model that was used for this research should be made more specific to really measure the impact that these factors have.

FUTURE RESEARCH

Future research should look at what leadership and entrepreneurial behaviour is with regard to emerging economies. Leadership comes in many forms. In western economies it often comes in form of one person. In Third World countries, however, it arises through collective action instead of an individual action. In addition, many studies have tended to assume that entrepreneurs act and think similarly no matter where they are globally located. However, the term entrepreneurship has a lot of different definitions. This makes it difficult for local governments what definition to choose. The terms leadership and entrepreneurship have a completely different definition in an emerging economy like Indonesia when comparing it with Western economies. In addition, the impact of



culture on leadership and entrepreneurship might also be an interesting subject to look at. This entails looking at religion, values and norms and the way these factors influence individual and organizational behaviour. Studying emerging economies not only contributes for better understanding these economies but it also broadens the view of how change management should be perceived in an unstable environment. Therefore there is an extension and revision needed of already existing theories with the consideration of new contextual variables. This also allows for researchers to develop new theories and models.

LIMITATIONS

One of the biggest struggles during the empirical research was the difference in educational level. In the regions of Baubau and Wakatobi it is common that a majority of people leave school at a young age to start farming or fishing. Some of the initial questions on the interview list had to be simplified because otherwise they could not understand the question. Also some terms that were used in the English list of interview questions could not be translated into Indonesian. For example, a word like 'phycoculture' (the farming of seaweed for commercial means) cannot be translated and therefore the translator had to improvise. And this, consequently, caused the second problem.

During the interviews there was a lot of dependency on the translator. First, the translator had to ask the questions in the right manner, otherwise the questions would not be clear. Second, the translator also had to give the right explanations for the answers to the questions, so he had to provide answers that could be used for the research. Third, the translator only gave a summary of what the interviewee was saying. This reduces the quality of some of the questions and answers.

The selection of interviewees was also quite unsystematic. The selection of the locations to visit and the people that could be interviewed was mainly done by local government officials. On one side this is very convenient, but on the other side it also caused some constraints because there were no options to conduct interviews outside of this selection.

During the visits to the seaweed cultivation areas not a lot of women were interviewed. Seaweed cultivation is an activity where the whole family is participating in. The somewhat heavier work, like the harvest, is done by males and the slightly lighter jobs, like attaching the seeds to the nets, is done by the women and children. For the research it would have been interesting to also interview women, but during our visit the harvesting season was almost over. Therefore, not a lot of women were present at the cultivation sides.



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Appendix 1: List of interview questions

1. Role of local government:

From previous research I have read that the role of the government is to facilitate possibilities for investors in the seaweed industry but it is not the role of the government to invest themselves in the industry.

1.1 In what form does the government facilitate the seaweed cultivators in this region?

1.2 How would you describe the relationship between the Local Government Agencies (LGAs) and the central government?

(Support of high LGA's is required since each policy proposal needs to be accepted by the *Legislative Department* before it can be implemented)

1.3 So what is the role of the Legislative Department on this matter?

1.4 What are the ambitions of the LGAs to develop the seaweed sector further?

1.5 Is the local government engaged to stimulate or maintain business activity and/or employment opportunities in this region?

1.6 Does the local government and investing companies do everything about it to maximize benefits; and to keep the earned benefits in this region?

2. Skills and Knowledge:

I want to ask you some questions with regard to Research and Development in this region:

2.1 Do the people in this region have the opportunity to learn skills that are crucial for the production of (new) products?

2.2 Do the people in this region want to make use of these opportunities?

2.3 How would you characterize the relationship between the government, the educational institutions and the firms?

From previous research I have read that some local universities in South East Sulawesi try to develop an agricultural program at high schools in Bau-Bau to increase the skills of children who later will be involved in the agricultural production

2.4 How do you know which children will be involved in the agricultural production in the future (based on educational level?)

2.5 What is the role of universities in providing knowledge to seaweed cultivators?

(Because I have read that LGAs do not provide support in running a business or provide location for their business. So, do they get information about entrepreneurship and leadership? Do they get skills training. For example from universities of the Agricultural Department of Bau Bau?)



Mr Abduh argues that the development of skills from seaweed cultivators – to increase productivity – and for the citizens of Bau Bau – to work in the production of SRC – is important to catch up with seaweed processing industries already established in Surabaya. Moreover, Mr. Abduh is not convinced that the skill level of the workforce in Bau Bau is sufficient to accomplish the process of catching up with other processing industries.

2.6 How to deal with this problem?

3. Firms' strategies

3.1 Are top-down policies appropriate, desirable and effective?

3.2 Are bottom-up policies capable of impacting locations beyond the regions and in what ways?

3.3 What should be the combinations of top-down and bottom-up policies?

3.4 What are the roles of cultures and values, and how do they vary from place to place?

3.5 Can policies be created and implemented that will be effectively and efficiently induces self-organizing adjustment processes?

4. Leadership styles

If you have to choose one of these leadership styles:

- Visionary
- Coaching
- Affiliative
- Democratic
- Pacesetting
- Commanding

4.1 Which one do you think best fits the situation in Bau Bau at the moment?

4.2 And do you think this is the right leadership style?

4.3 If not, which one do you think it should be?

There are five key components/preconditions for effective leadership to enhance the economic development process in a region. These are:

- Collaboration;
- Trust;
- Shared power;
- Flexibility;
- Entrepreneurialism.



4.4 Do you think the people (that can be seen as the leaders of this region) and institutions can be characterized by one or more of the components mentioned above?

5. Leadership in the region

5.1 What are, according to you, the characteristics of the mayor of Bau-Bau?

- A political leader who shapes the context of progress and projects;
- A public leader who helps to determine the direction that citizens want their city to take;
- A political party leader who promotes the interests of the political organization.

5.2 And, looking at the question above, what is the mayor's leadership style?

- Does the mayor react to circumstances as they arise or;
- Does the mayor anticipates and helps to shape change.

5.3 What is the influence of the central government on local government institutions?

5.4 What is the influence of the following institutions on the development of this region:

- Local chambers of commerce
- Development agencies
- Trade associations
- Financial institutions
- Political parties
- Government agencies
- Business service organizations

6. Rule structures

6.1 Are there in this region clear rule structures, for example: principles, standards, laws and regulations?

6.2 Do the people know (governance):

- What may or may not be done?
- What the consequences are if violated?
- How things have to be done?

7. Turnover

7.1 How about turnover in this region, do a lot of valuable people leave this region to work somewhere else?

7.2 Does this turnover have a high influence on the development of this region?

7.3 Do the people in this region trust government institutions?

7.4 Is this region characterized by centralized or de-centralized decision making?



7.5 What do government institutions do to attract industries and investors to this region? Think of:

- Business attraction efforts
- Business retention efforts
- Business creation approaches
- Imports substitution by expanding local production to combat an imported good or service
- Incentives, such as tax relief; infrastructure augmentation, marketing and training assistance, and subsidies to firms.

There are several factors that have an influence on the effectiveness of local economic development:

- The degree of political jurisdictional fragmentation;
- The degree of cooperation among local stakeholders (public, private, intermediate and individuals);
- The tendency for a region to participate in local problem-solving;
- The availability of resources locally for economic development.

7.6 To what extent do you think that one or more of the factors are present in this region?

From previous research: after the compulsory education till their 16th, the disabled and less bright children quit school and start to work in the seaweed industry in Palabusa. The brighter children – often women according to the cultivators – study further at universities all over Indonesia. Most of the children who graduate from university do not come back in the village to live and work but will find employment in the other parts of the island or country, most of the times in cities.

7.7 How to retain these people?

7.8 Seaweed cultivation is mainly a male activity, how to involve more women?

From previous research I have read that an important reason to choose seaweed cultivation as target commodity is that seaweed cultivation also serves as the main source of livelihood for the majority of the people in villages around the coastal line of Bau Bau. Increased possibilities for schooling and the schooling effects will positively will flow back into the community. This is probably not the case because of high turnover in the area.

7.9 How to deal with this problem?

8. Entrepreneurship

When looking at entrepreneurship, in traditional people are mainly motivated by pure profits. But in development regions this is different. In other words, they are motivated by love of region. Entrepreneurship is mainly about seeking and recognizing opportunities and new ways of achieving goals and objectives.

8.1 How should you characterize the term entrepreneurship when you look at this region?

(Entrepreneurs can be from different background, including government, community organizations, bankers, CEOs who head up committees to solve bottlenecks in the development of a region)

8.2 Are people in the region being encouraged to become more entrepreneurial (aware, creative, and opportunistic)?



8.3 Are the people in this region provided with capital and knowledge to improve their business?

8.4 Do the people get some form of financial support?

9. Cooperations

According to previous research the seaweed cultivators mention that there have been no attempts in some of the villages to develop a cooperation of seaweed cultivators. This because of a lack of a cooperation or system to facilitate the organization of seaweed might play a role in the problems to provide an effective training and to transfer knowledge from the LGAs to all seaweed cultivators. According to them, having a cooperation could foster the communication between LGAs and farmers.

9.1 How should a cooperation of seaweed cultivators, according to you, look like?

9.2 Do you think developing a cooperation of seaweed cultivators will be effective in this region?

10. Region's resources

10.1 Can you say something about the supply of the following resources in this region:

Material
Manpower
Management
Markets
Money

From previous research I have read that the amount of capital provided to seaweed cultivators increased from 1billion rupiah before the LERD course to 3-5 billion rupiahs at present

10.2 Due to the increased investments is the production of seaweed also increased in the region of Bau Bau?



Appendix 2: Empirical research

The numbers of the paragraphs correspond with the numbers of the boxes mentioned in the model (in the Results section). In addition, the colours of the paragraph headers correspond with the colours of the boxes in the model.

1. Market conditions and resource endowments in Sulawesi

Level of income and prices

It is statistically proven that the coastal areas in Indonesia have a lower average income in comparison with the rest of Indonesia²⁹. The average income of the people who are in the seaweed business is significantly higher than the people who are in the fishery business. Nevertheless, most of the people in Baubau use the cultivation of seaweed as an additional income. Those people do not know that they can earn more when they focus their attention on the cultivation of seaweed. In many cases the seaweed cultivators also get ripped off with regard to the prices they get from the local traders for their harvest. The seaweed cultivators have to sell their harvest to those local traders in return for money and funding. In most cases the prices those seaweed cultivators get for their harvest is much lower than they can get when selling it to another trader. The problem is that those seaweed cultivators do not know that they can get a higher price for their harvest somewhere else. The local traders make use of this weakness. At the moment there are three important on-going issues that have an influence on the seaweed industry in Baubau:

- The quality of the seaweed is decreasing;
- The market price of seaweed is constantly fluctuating;
- The prices and costs of seaweed are highly depended on the area of cultivation (because of transportation costs: 20% is used for Indonesian market and 80% for international market (with China and Japan, by far, as the biggest importers)).

Looking at the issues mentioned above, it is also important to see the influence of China and Japan on the current prices in the Indonesian seaweed market, because they have such a high stake in the import of this product. China just buys all the harvest that there is, without looking at the quality of the product. This is a bad development, because when Chinese importers do not look at the quality of the product anymore, the seaweed cultivators will also have a lower quality standard. When the quality of the product will decrease more and more, traders will not buy their products anymore, especially when they are not selling to the Chinese but to other countries (where the

²⁹ Interview with Mr Anggadiredja



quality standards will be higher). In the long term this can have a negative influence on the regional development in those areas.

The invisible hand of the market, where supply and demand will determine the price of the crops for the local seaweed cultivators, is an important aspect of the local seaweed industry³⁰. The local government only intervenes by setting a minimum price for the crops. The minimum price for the seaweed at the moment is 6000 Rupiahs per kilo for the local seaweed cultivators. The market mechanism with its 'invisible hand' has to do the rest.

The interviews that were conducted in Wakatobi, however, showed the surprising fact that the prices of the seaweed over there are not dependent on the market demand and the supply of seaweed³¹. It is dependent on the level of production of seaweed in a certain region. This is because when the production is high, the quality of the seaweed will also be higher, and there will be less seaweed that is affected by the Ice-ice disease³². In this way the price can also be higher. The local government is constantly stating that the market mechanism determines the prices in the current seaweed market. This means that when demand is high, the price of seaweed will also be higher. So this should mean that when production is low, the price should be high, and the other way around. The problem in Wakatobi is that the village governments do not have sufficient supervision on the market mechanism in this region. The interviews that were conducted in Baubau showed a different outcome than the interview conducted in Wakatobi³³. The prices over there are established by looking at supply and demand. At the moment the supply is rather low because the dry-season has just ended. The supply is now around 100 tons of seaweed. This means that the price of seaweed is now pretty high (8000 Rupiah per kilo, minimum price is 6000 Rupiah per kilo). In the dry-season it is normally over 300 tons of seaweed. In that period the price will be somewhat lower (7000 Rupiah per kilo). Contradicting to what happened in Wakatobi the local (regional) government (and not the village governments) have the supervision on the functioning of its invisible hand. This system works better than the system used in Wakatobi.

Price stability is one of the most important aspects with regard to the cultivation of seaweed³⁴. The market demand should be clear. If the demand is clear and stable there can be a system created to sell the seaweed in a better way. The most important outcome of developing a

³⁰ Interview with Mr Eli, Mr Feto Daud and Mr Ali Hassan

³¹ Interview with the seaweed cultivators in Wakatobi (Part I)

³² Ice-ice is a disease condition of seaweed. Ice-ice is caused when changes in salinity, ocean temperature, and light intensity cause stress to seaweeds, making them produce a "moist organic substance" that attracts bacteria in the water and induces the characteristic "whitening" and hardening of the seaweed's tissues

³³ Interview with a warehouse owner

³⁴ Interview with the Mayor of Baubau



better seaweed cultivation area is to increase income and the standard of living in Baubau. The price of seaweed is currently determined by the collectors, the local government only sets-up a minimum price. This system has to be changed in the near future.

Dependency on the bigger industries

In the region of Baubau and Wakatobi there are two different kinds of seaweed cultivators³⁵. There are the ones that are independent. These seaweed cultivators just grow seaweed to sell it on the local market, but they do not have to sell this seaweed to a particular buyer. They can choose for themselves which buyer they want to select. This is, in most cases, the buyer who gives them the highest price for their crops. And then there are the dependent seaweed cultivators. They have to sell their crops to specific buyers. These buyers are mainly working for the bigger seaweed industries in Surabaya and Makassar. In return the seaweed cultivators get funding and investment out of this region to set-up their own business³⁶. They can also get a loan from the government, like the independent seaweed cultivators. Approximately 60% of the seaweed cultivators in Baubau are dependent and 40% of the seaweed cultivators are independent.³⁷ The local government has a strong connection with the industries in Surabaya and Makassar. Raw materials (unprocessed seaweed) are shipped from the new harbour in Baubau to these cities and later on exported to other countries like China and Japan. In most cases, independent do not want any form of support from the local government because they do not trust them. These cultivators think that they have to pay the local government back in the long-term. So, as mentioned above, also 60% of the seaweed cultivators get support from the local government and 40% of the cultivators do not accept any form of support.

The seaweed cultivators invest themselves in the warehouses where they can sell the seaweed³⁸. In these warehouses cultivators can collect their seaweed and sell it for the highest price. All this seaweed is at the moment going to the big industries in Surabaya or Makassar. These industries also invest in the region of Baubau and in return the cultivators have to sell all of their harvest to the same company. The investments of these companies are in terms of capital and material, like nets, to help the people with the cultivation of seaweed. There are many warehouses in the region of Baubau. The most companies that are active in the region of Baubau come from Surabaya and Makassar. Because of the shifting market demand the cultivators are really dependent on the warehouses and industries. So the coordination between the industries and the cultivators has to be very high. PT Arahon is one of those companies that is already active in the Baubau-region. PT Arahon is a Chinese investing company. They do not have a factory yet but it will be there in the

³⁵ Interview with the seaweed cultivators in Wakatobi (Part I)

³⁶ Interview with the seaweed cultivators in Baubau

³⁷ Interview with Mr Eli, Mr Feto Daud and Mr Ali Hassan

³⁸ Interview with Mr Eli (Part I)



short-term. This company is already- involved in the production of fish and pearls. Seaweed will be the third product that they will be producing. There are a lot of companies, like PT Arahon, that want to invest in the Baubau-region but a lot of companies cannot do this because of the strict regulation. So the role of the government is quite visible when you look at the strict regulation. This is in contrast with the local government saying that their role is minimal and it only sets-up a minimum price for the seaweed crops.

Other activities

The local government of Baubau is trying to set-up a seaweed processing industry in this region. The establishment of this seaweed processing industry will stimulate the economy in the region of Baubau enormously³⁹. So the local government will do everything in its power to make this happen. But this will also mean that some local buyers or sellers have to find a job somewhere else. Some of them can find employment within the seaweed industry but other former seaweed cultivators have to find another job to do. The local government is, however, only looking at the long-term effects of developing a seaweed processing industry in Baubau and these are positive and that it will stimulate the local economy significantly. The local government does not see the short-term effects (e.g. loss of jobs for some of the seaweed cultivators) as their problem to solve⁴⁰. According to them, this is just the way it goes and they see it as the responsibility of the local buyers and sellers themselves. So the local government is denying that it is their responsibility to help these people but the government does not see that by investing in this seaweed processing industry it is also responsible for what happens to the local buyers and sellers that will run out of a job if this industry is developed.

Seaweed cultivation is really dependent on the weather conditions⁴¹. The dry seasons are the best ones to cultivate and dry the seaweed. Seaweed is a natural resource so the cultivators know that they are really dependent on the weather. There is nothing to do about or change it. But a problem on this matter is the depletion of natural resources (the seaweed) during the dry months. There is still no solution for this problem and future research has to be conducted on this matter.

There are a lot of seaweed cultivators in the region of Baubau who do not cultivate during the entire year, they only cultivate in the dry-season⁴². The rest of the year they are doing other marine-related activities like fishing and collecting pearls. Others leave the region and go to work

³⁹ Interview with Mr Eli, Mr Feto Daud and Mr Ali Hassan

⁴⁰ Interview with Mr Eli (Part II)

⁴¹ Interview with Mr Eli, Mr Feto Daud and Mr Ali Hassan

⁴² Interview with Mr Hardy Luomo and Mr Helmi



somewhere else. Most of the cultivators normally stop cultivation around mid-October⁴³. But there are also cultivators who are just starting at that time. They think that cultivating around this time is even better than the cultivation of seaweed during the dry-season. Based on their own knowledge and experience these seaweed cultivator choose to cultivate in this season because in their opinion this is better. So these people really rely on their own knowledge with regard to the cultivation of seaweed. But they do not know for sure if this really is the better season for cultivation (this is probably not the case).

Turnover and retention

A lot of people, especially the higher educated ones, leave Baubau to work in the bigger cities where they can earn a higher income⁴⁴. This negatively contributes to the development of the region, especially with regard to (the lack of) entrepreneurship, because the people who are better educated and are more skilled should not only pursue jobs in the bigger cities but they should also think of contributing to the regional development of the less developed areas and, with that, the provision of knowledge and skills. The local government thinks that they cannot do anything about this⁴⁵. According to them, when demand is high the people will stay in this region or they will come back. And when demand is low people will do other activities next to seaweed cultivation or they will move out of the region.

The current Indonesian education system is not helping either⁴⁶. When you go to school in Indonesia, in most of the times, people get taught how to work for other companies but they do not get taught how to set-up their own business and/or get taught how to become an entrepreneur. This will lead to local people who are not interested to return to less developed regions because there are no jobs there that match their educational levels. Therefore educational institutions should focus their courses more on entrepreneurship (see paragraph about Entrepreneurship).

Muna

On the opposite side of the island of Baubau there is the island of Muna⁴⁷. Muna has the highest seaweed production level of Southeast Sulawesi. And there is also a government company active on this island that is called Soliwunto. This company encourages and stimulates seaweed cultivators by training them, giving them funding and providing them with knowledge. The government is really engaged in doing this because they also own the company and therefore production has to be high. Because of the high production on Muna, Ice-Ice disease is not such a big

⁴³ Interview with the seaweed cultivators in Wakatobi (Part II)

⁴⁴ Interview with Kiky

⁴⁵ Interview with the Mayor of Baubau

⁴⁶ Interview with Kiky

⁴⁷ Interview with Mr Eli (Part II)



problem as in Baubau, because the occurrence of this disease is relatively low when you compare it with the total production on the island of Muna. But Muna is not an example for Baubau because Muna and Baubau are two different kinds of areas with different resources and regulation. It seems that the local governments in Baubau and Muna are not working together at the moment. This is an odd situation because, especially, Baubau can profit from working together more closely with Muna. To strengthen the process of decentralization there should be a stronger collaboration between the local governments.

Women involvement

The male activities are mainly the fishing itself and putting the nets in the water⁴⁸. These are the heavy chores that have to be done. The women and children in families are involved in the preparation of the nets and putting the seeds into the nets for the cultivation of the seaweed.

2. Governmental institutions in Sulawesi

Governmental institutions are an important factor with regard to the regional economic development in Baubau. After doing the field research in Baubau a lot of information was gathered about the functioning of the central government of Indonesia and the local government in Baubau. This information will give some more clarity about the current and future developments in this region.

Indonesian legislation

After the New Order rule, the central government is in a process of decentralization. The Constitution 45 Article 18 after amendment states that local government both provincial and regency/city is given authority to regulate and manage their own autonomous region. From the above explanation, the Constitution clearly states that in this era of freedom, a region is free to set their own rules, taking into account the principles, laws and regulations. Also described in Law No. 22 of 1999 that the broad powers of autonomy is the freedom to govern areas that include all areas of government authority, except authority in the field of foreign policy, defence and security, justice, monetary and fiscal, religion and authority in the field of planning, implementing, monitoring, controlling and evaluating.

Some people think that the most appropriate systems is to use the Principle of Proportional Decentralization and Control⁴⁹. It means the Local Government is given the authority as much as possible to manage, regulate and promote its own territory (except the five fields mentioned above), where the role of the central government is the supervision, guidance, implementation and, if

⁴⁸ Interview with the Mayor of Baubau

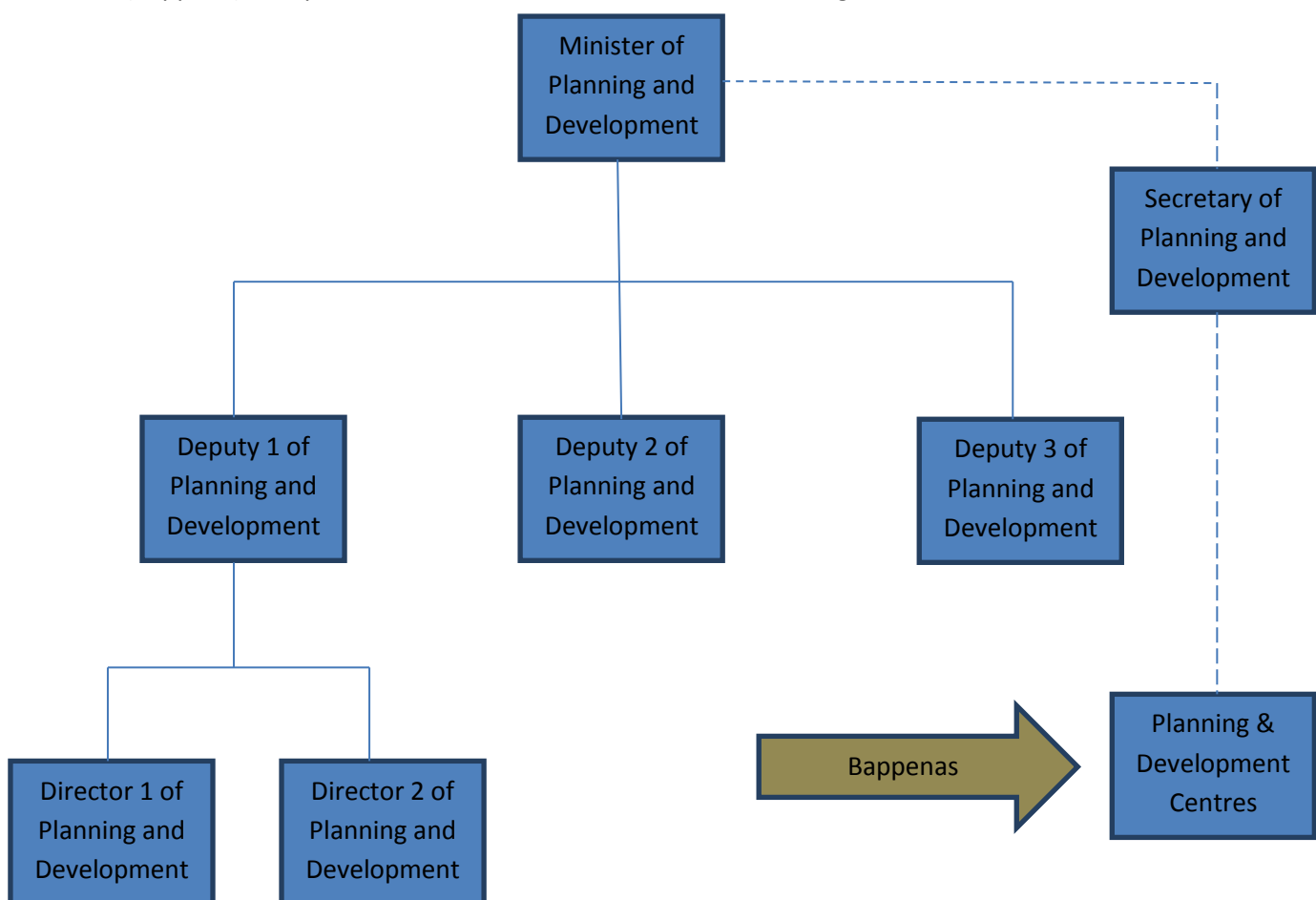
⁴⁹ Interview with Kiky



necessary, intervention in the local government system. There should also be a differentiation between government systems. Some provinces are more developed than others. For provinces that are already more developed and have highly trained and professional actors, the central government should only monitor these provinces, meaning that the central government provides these provinces with a broad autonomy. For provinces that are less developed, the central government should be more present and be involved in the implementation of processes. Therefore it is important that there are more people from the central government in the local governance, without compromising the principle of autonomy. It is difficult to decide which province is, momentarily, more developed than the other. The government should develop a benchmark to measure the functioning of the different provincial government systems.

Bappenas office and LERD team

The function of the Bappenas office (Ministry of National Development Planning) is very important when looking at the regional and economic growth in regions like Baubau⁵⁰. The Bappenas office supervises national planning developments in the different local governmental institutions (Bappeda). The position of this office is easier to show in this figure below:



⁵⁰ Interview with Mr Guspika



The main activity of the Bappenas office in Jakarta is to help government institutions with:

- Career planning;
- Education planning;
- Planning of training.

And the outputs from the activities of the Bappenas office are:

- Policy analysis;
- Development planning (yearly, mid-term (5 years) and long-term (20 years):
 - o Economic
 - o Social
 - o Spatial

LERD teams

The Bappenas office also supervises the LERD teams. LERD (Local Economic and Regional Development) teams are specifically set-up to develop regions like Baubau. Not everybody can join a LERD team. The people who work for local governments (Bappeda) that want to apply for this function have to write an assignment letter. This assignment is developed by the Bappenas office and the people who finished the assignment letter in the best way have a great chance to make it. One of the obstacles in creating a LERD team is the English linguistic skills that the applicants have. At least one of the members of the LERD team has to speak proper English, because they have to present their assignment and planning in the Netherlands in English. After the composition of the LERD team is clear the team will perform pre-field visits to the region. For example, the LERD team in Bau-Bau had to visit the local farmers to get to know who those people are and how they work. After these pre-field visits they go abroad to work on the project. They create Action Plans and perform SWOT analysis. When the team comes back to Indonesia the Action Plans will be implemented in the local settings. The function of the Bappenas office is to monitor and control after 3-4 months the progress of the LERD team and all their activities they are performing in collaboration with the local government. The LERD team that was active in the Baubau region was perceived as successful. It managed to get support from central and local government for the implementation of their Action Plan.

Local legislation

The Indonesian legislation is maintained for the entire country. There should also be legislation that is focused on the local industry. At the moment there are almost no rules and



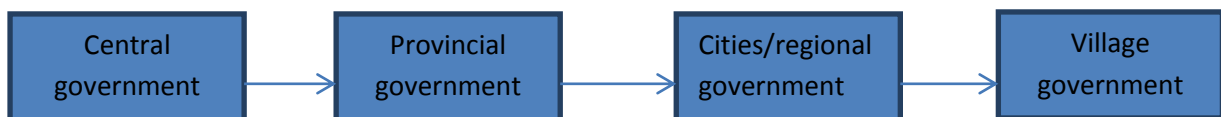
standards with regard to the cultivation of seaweed. Only the areas where the seaweed cultivators can set up business at the coast are explained by the local government⁵¹.

Relationship between local and central government

After doing the field work it became clear that there was a consensus between all the interviewees that the relationship between the central and local government is an important issue with regard to the development of the regions. There are two big problems on this matter⁵². First, the collaboration between the local government and the central government is really bad. Second, the local seaweed cultivators should be involved in this collaboration between the governments. The local government should get to know the people who they are working with. This is why the pre-field visits were introduced in the LERD-program. So this means that local seaweed cultivators, the local government and the central government should work together to become more effective. There are three big challenges for the government with regard to the seaweed cultivation in Baubau:

- Increasing production;
- Open access to markets for cultivators;
- Get more capitals by using better models and techniques for cultivating.

The local seaweed cultivators, the local government and the central government should work closely together to develop the region further. Through a better collaboration between all these parties the local seaweed cultivators can get more money from the production directly. For this to happen, the regulations on seaweed cultivation made by the central government should be revised. The central government is at the moment already in the process of decentralization so this would be a logical next step. The central government is already giving the provincial governments more authority. The chain of command looks like this at the moment:



From the interviews it also became clear that the central government should facilitate the local region of Baubau more than they are doing now. To mention an example: the distribution of ropes⁵³. Ropes have to come all the way from Java, so it is very expensive to transport these ropes to Baubau. The central government should facilitate the local government and the seaweed cultivators

⁵¹ Interview with Mr Eli, Mr Feto Daud and Mr Ali Hassan

⁵² Interview with Guspika

⁵³ Interview with the Mayor of Baubau



more. At the moment there is no direct relationship between the central and local government. The local government does have autonomy but the central government should pay more attention to this region. Especially because it has a lot of growth potential. The facilitation for the seaweed cultivators and the local government now mainly comes from abroad. South Korea has a good connection with Baubau and is willing to invest in this region (see paragraph Foreign Investments below).

Ambitions to develop the region further

One of the main ambitions of the local government at the moment is to build a good infrastructure for distributing the seaweed⁵⁴. The local government also wants to make a seaweed factory or refinery in Baubau but they need more investors for this. At the moment there is not enough funding to do this. Every 8 years the local government make a new plan how to develop the region further. The Action Plan of the LERD plan was the basis of the planning of this period. Every period they make a revision of what they have done and what's need to be done. And then set new goals. The development is still not perfect and they are really concerned about this.

Foreign investments

At the moment the local government of Baubau is closely collaborating with a couple of big South Korean investors. They are working together on several elements⁵⁵:

- Agriculture;
- Language;
- Trading;
- Education;
- Culture.

These new investors create also an opportunity for the local seaweed cultivators⁵⁶. The local government is trying to involve South Korea more in their activities. There are already some places in Buton (the island where Baubau is located on) that already can speak Hangeul (the official South Korean language). So there are definitely opportunities to develop this even more. This collaboration with South Korea is at the moment one of the key issues where the Department of Tourism is working on. The local government and South Korean investors are currently also collaborating with regard to education. The government of South Korea sent 300 computers to the educational institutions in this region. One of their aims for this donation is to educate the younger people in this region better, especially by using Information Technology (IT). IT is one of the weakest aspects in this

⁵⁴ Interview with the Mayor of Baubau

⁵⁵ Interview with Mr Suhufan

⁵⁶ Interview with Mr Suhufan



region at the moment. A lot of people do not have access to internet so it is difficult for them to exchange information and communicate.

However, it should be clear that there is no collaboration yet between the local government and South Korean investor with regard to investing in the local seaweed industry⁵⁷. At the moment there is only collaboration on agricultural and educational level. But the region of Baubau offers a ambitious potential for further growth in the future, especially with the new and improved infrastructure in the area. In the recent years the local government developed an airport and a new harbour. This certainly improves the possibilities that there are for doing business with South Korea, but also with other countries that are interested.

Financial support from the local government

At the moment the Indonesian government wants to expand the amount of money they invest in marine activities⁵⁸. This means that this money is already there. The problem is that to handle all this money the local government should also function well to manage this new income. The central government is currently postponing their investments with regard to the seaweed industry. Some local government elements are already performing well, and the central government does not want to intervene in these structures. But other local government elements are not performing that well. In order for the central government to decide which local government it should use a benchmark to measure the functioning of these local governments. The local governments that are not functioning properly should be steered by the central government. These activities have to be performed first before the central government will invest in the marine activities in this country.

The local government in Baubau does not support the local seaweed cultivators with funding, they only facilitate the process⁵⁹. Seaweed cultivators cannot just ask for money at the local government. If just everybody can apply for money at the local government everybody would do it. Then you will get a big group of seaweed cultivators who are not really motivated and only need the money for other activities besides seaweed cultivation. The local government wants to create a system in which the local seaweed cultivators have to be encouraged and stimulated to set up their own business. In other words, the local seaweed cultivators should go to the bank to apply for a loan with a low interest. In order to achieve this, the local government will help to train the local seaweed cultivators how to apply for such a loan. It does this by e.g., providing them with example approvals and giving them courses in writing down these forms. In this way, the local government is mediating between the local banks and the seaweed cultivators. In addition, the local government also prevents

⁵⁷ Interview with Mr Eli, Mr Feto Daud and Mr Ali Hassan

⁵⁸ Interview with Mr Anggadiredja

⁵⁹ Interview with Mr Eli, Mr Feto Daud and Mr Ali Hassan



Wakatobi's problem where the money never reaches the seaweed cultivators themselves because the village government kept it for themselves. Baubau's local government will prevent this because they do not give the money to the seaweed cultivators but they train them in applying for funding or a loan at financial institutions.

Also the seaweed cultivators clearly mention that they do not get any form of financial support from the government⁶⁰. This confirms the statement that the government only facilitates seaweed cultivation but do not support them financially by giving them money. A nice example of this support is the motors that are used for the boats. The motors will be supplied and delivered by the government. In return the government gets a part of the profits of the seaweed cultivator; this will be the amount that the government paid for the motor when supplying it for the cultivators. So the local government did not give them the money, they only facilitated the process in providing them with loans and materials.

Problems and weaknesses

Finding information about governance with regard to seaweed cultivation in the region of Baubau was really hard. It was not clear if there were any laws, rules, regulations or standards present that can structure the cultivation of seaweed in this region. This data only contains numbers of seaweed cultivators present in a certain region, the size of the area to cultivate in and the material they use for the cultivation. Collecting data on this matter is an on-going process⁶¹. When this data has been retrieved, regulations will be adjusted accordingly. But a big problem on this matter is that when harvest is bad for the seaweed cultivators, they just go somewhere else. So the seaweed cultivators are constantly moving. It is hard to set-up regulations when people are on the move all the time.

From the interviews it became clear that the local government is currently struggling to manage the development of the seaweed cultivators. One of the causes of this is the lack of financial support. But another important issue is that the local and central government neglect regions like Baubau because they do not have attention for these regions⁶². In this way the communication between central and local government will go wrong, because the wrong government departments are giving advice about issues that are not under their jurisdiction. For example, the central government should make arrangements on the amount of seaweed cultivators and traders that can come to certain areas. At the moment the seaweed cultivators and traders just

⁶⁰ Interview with the seaweed cultivators in Baubau

⁶¹ Interview with Mr Eli (Part II)

⁶² Interview with Mr Anggadiredja



come and go as they like. There should be put a hold on this because otherwise the region will become overcrowded (Palabusa is one of these areas).

3. Educational institutions in Sulawesi

The Indonesian universities are also showing an increasing amount of interest in the region of Baubau. For example, the University of Indonesia wants to make Baubau a 'City of Education'⁶³. This means that this university will conduct more research in this region and therefore has to strongly co-operate with the local government to do so. Surprisingly, this is one of the first collaborations in Indonesia between an educational institutional and a governmental institution.

The University of Kendari (Universitas Haluoleo Kendari – UNHALU) are also doing research in the region of Baubau about the improvement of the quality of seaweed and producing seaweed that is better resistant against the Ice-Ice decease⁶⁴. The results regarding this research are positive. The research is already successfully performed on a small-scale basis and it should have been continued in 2010, because this method has to be tested on the large-scale, otherwise this method will not be approved by current scientists. The problem is that there is no funding at the moment for further research. All the samples are at the moment stored in cold storage areas, but the quality of these samples and the amount of seaweed that is valid for research is decreasing by the minute. Without quick incentives for funding, all this research will have been done for nothing. So the research can then be seen as a waste of money.

Besides the growing interest of educational institutions outside of the region, there are also other institutions in the region where people can get education⁶⁵. The region of Bau-Bau has three universities/high schools, namely a Science Technology school, a Nursery high school and an Islamic high school. The quality of this education and the facilitations at these institutions are however questionable. The standards at these institutions are often quite low and the level of education is not really high.

At the moment there is no collaboration between educational institutions, the local government and the industries with its cultivators⁶⁶. This is an important aspect that can be improved according to the Mayor of Baubau. The ambition of the local government is therefore to get more and more educational institutions involved in developing the people in the region⁶⁷. For example, a Marine and Fisheries High School has been developed in Baubau due to the initiative of the city government and

⁶³ Interview with Mr Suhufan

⁶⁴ Interview with Mr Wahu

⁶⁵ Interview with Mr Suhufan

⁶⁶ Interview with the Mayor

⁶⁷ Interview with Kiky



the central city area. And also universities are providing support in terms of technical assistance and supporting research. Most of the students attending these high schools are also born and raised in the region of Baubau. Each year students from universities are required to perform their final level of service learning activities (Field Work Experience) in accordance with their majors. From there they can implement the knowledge gained during lectures in practice. However, education should not only be focused on the production and cultivation side, considering the limited amount of land in the region, it should also be focused on collecting and processing of seaweed. The ambitions of Baubau are that this city is going to act as a trading town where most of the commodities in and around the region of Baubau are gathered before sending it to the bigger seaweed industries in Surabaya and Makassar. Baubau will then act as a centre of collecting and processing for the seaweed industry. This will create new employment opportunities for residents because employment is not only based on seaweed as a raw material but also as a semi-refined product.

4. Skills and knowledge in Sulawesi

After doing field research in Indonesia it became clear that the government is already facilitating the seaweed cultivators in Baubau in a couple of ways. The local seaweed cultivators are able to join, for example, courses and work programs⁶⁸. These courses/work programs are provided by:

- Baubau city government
- Department of Industry & Trade, Cooperatives and SMEs
- Department of Agriculture and Marine

And these courses/work programs are in the form of, for example:

- Strengthening business capital (by providing e.g. soft loans)
- Providing training (e.g. cultivation techniques, eradication of pests or diseases)

According to the Mayor the local government also gives training and workshops to the seaweed cultivators about how to get nice seed and how to plant this seed⁶⁹. So the local government gives advice about the whole process of cultivation. The local government also supplies the local seaweed cultivators with ropes. And finally, the local government sets-up a minimum price for the seaweed crops and they facilitate a good infrastructure for distributing the seaweed.

⁶⁸ Interview with Kiky

⁶⁹ Interview with the Mayor



In terms of human resources, there are already a lot present in the region of Baubau and they also have a lot of potential to grow⁷⁰. They have to be trained with skills and knowledge. That is what this region is lacking of at this moment. An important item on this matter is how to involve and organize local people and their cultures to educate them and let them improve their skills? The local government still has no clue how to deal with this problem. A good system should be developed to help with the organization of these people. So first of all it is important to organize human resources in this region. Second, should be the organization of other important aspects of this region like culture, norms and values of the different people in this region. For example, the island of Buton is divided in two separate areas; one of these areas is Bau-Bau. The different people in this region are in general very diverse, and they have a strong autonomy. How to reach these people and develop them? Especially Buton is an island where the inhabitants have a really strong culture and when the local government really want to change this region and develop it all people should be involved in the change process. The people in this region are really afraid that the local government will try to change their natural habitat and thereby also influence their strong autonomy, culture, morals and values. These people need the insurance of the local government that these issues will not be affected by local change and that their strong autonomy will be preserved.

The local government does not give money or funding to the local seaweed cultivators, but it does help with the facilitation of material and training for them⁷¹. In some cases, like in Kaledupa, the local government even provides a factory for processing and refining the seaweed. They did this in collaboration with LIPI (Lembaga Ilmu Pengetahuan Indonesia – The Indonesian Institute of Sciences). LIPI provides money to the local government and in return it can do a lot of research in this region. The newly built factory in Kaledupa is one of the outcomes of this collaboration. Both LIPI and the local government have spent money to facilitate this building, but at the moment there are still no agreements on who should provide money for machinery and equipment for this building and in what amount. The people who are going to work in this factory do need the right skills and knowledge to operate this equipment and machinery. At the moment it is still not clear who is going to provide this knowledge and skills. The combination of both the trainers of the local government and the experts of LIPI should provide a great base for skills and knowledge. This is especially the case right now, because the building is already there. At the moment they are just wasting money by not making use of this factory.

⁷⁰ Interview with Mr Suhufan

⁷¹ Interview with Mr Hardy Laomo and Mr Helmi



Corporate Social Responsibility

One of the ways to teach people the right skills is to let them get training at state-owned companies and universities⁷². In Indonesia state-owned companies and universities are obliged to give something back with regard to the development of the poorer society, the government calls this CSR (Corporate Social Responsibility). Universities and companies also give courses in management and entrepreneurship to fulfil on their CSR-demands. So the opportunities to learn more skills and get more knowledge are there. The first problem on this matter is that the people do not know that these facilities are there and that they can use it for free. Some people do know that these facilities exist but they just do not believe that it is free for them. So the level of trust on this matter is quite low. The second problem with regard to the CSR is that also the local governments do not know how to handle it. They do not know how to manage the extra facilities they get from companies and universities because of the CSR. This should be the responsibility of the local government. The original concept of CSR works like this: the local government invites companies and universities to spend their CSR in a certain region, the companies and universities then can decide for themselves if they want to spend it in that region yes or no. So there is also a big responsibility for local government on this matter. They have to present themselves as the region where the companies and universities should focus their attention on.

There are also some problems with regard to the concept of CSR⁷³. First, only state-owned companies have to spend money on CSR (minimal 5% of total income), private-owned companies do not have to spend money on CSR. Second, the measurement of the effectiveness of the CSR is not measured in the right way. Right now the effectiveness of CSR is measured by the amount that a company spends on CSR and the amount that is distributed to the people, but there is no overview of what exactly happens with this money. Some form of an association, like a cooperative, should handle the coordination and control over this money, but not a lot of people are joining and/or participating in these associations. If there was a better overview of this cash flow it would benefit the government and the companies. In this way companies can also work together to create a development program for small enterprises.

Problems and weaknesses

A big amount of information that was gathered during the field research was provided by government officials. The interviews that were conducted with the local seaweed cultivators however provided somewhat contradicting information. The local seaweed cultivators in Wakatobi

⁷² Interview with Mr Budihardja and Mr Adiarso

⁷³ Interview with Ms Indarti



mentioned, for example, that the local government does not facilitate them at all⁷⁴. The cultivators really wanted to receive some form of training, and thereby get more knowledge and skills about the cultivation of seaweed. This is especially the case in the periods when the harvest is bad. The main reason for a bad harvest in this village is the Ice-Ice disease. Large parts of their harvest are affected by this disease. With more training and thereby obtaining more knowledge and skills they want to learn how to handle with this problem in the best manner and they can also learn how to improve the quality of their seaweed and thereby get a higher price for their harvest. But the cultivators in Wakatobi, for example, did not know how to apply for funding and training at the local government or send an approval to them. And in the cases where the application for funding was approved, the money never reached the cultivators and the local government kept this money for themselves. The cultivators do not dare to say something about this because it could endanger their position in the local village. So the level of trust amongst the cultivators and the local government is really low.

Another problem, besides this, is that the local government also postpones the donation of money and material to the seaweed cultivators⁷⁵. In this way, the money and the material that is needed for the harvest will arrive too late (after the dry-season) and the profits of the seaweed cultivation will be low. The people in Baubau also do not pay a lot of tax. So the amount that can be spent on developing people is limited. So there is no big budget for training seaweed cultivators and facilitating them in other ways. But seaweed cultivators can get the ropes and nets for cultivating seaweed from the government for free. But this is only the case for the local independent seaweed cultivators. The seaweed cultivators that are producing for the big industries in Surabaya and Makassar can lend money from the government but they will have to give this money back.

The low level of trust between the cultivators and the local government is also a concern in another way. Sometimes the local government offers materials, like ropes and nets, to the cultivators⁷⁶. However, the cultivators do not want to accept these offerings because they are afraid that they eventually have to pay for these materials in the longer term. They do not trust the local government, especially not when they are offering free material. Those seaweed cultivators want to stay independent and do not want any obligations to the local government. The cultivators do make use of training opportunities that the local government provides. Amongst other skills, cultivators learned from local trainers which periods or seasons to use fertilizer on the crops and when not to use fertilizer. This training is however not really stable and dependable. The local seaweed cultivators only receive training when the harvest is bad. So the amount of training the cultivators get is really

⁷⁴ Interview with the seaweed cultivators in Wakatobi (Part I)

⁷⁵ Interview with Mr Eli (Part II)

⁷⁶ Interview with the seaweed cultivators in Wakatobi (Part II)



dependent on the quality and quantity of seaweed of the cultivators. In other words, when the seaweed harvest in a certain period is sufficient, the people will not get training, but when the harvest is bad, people get training opportunities.

There are still many obstacles regarding the functioning of the local government system⁷⁷. There are still a lot of local government officials working who lack the initiative and ability to help to develop the Baubau region. According to Kiky this is partly because of the failing recruitment system which is still somewhat problematic. The remuneration (income/salary) for the local government officials is also quite low.

There are also problems on the side of the cultivators themselves. One problem with regard to the cultivation of seaweed in Baubau is that there is a big gap between the modern and the traditional seaweed cultivation techniques⁷⁸. These traditional seaweed techniques might become too inefficient in a couple of years and they cannot keep up with the high growing seaweed-processing industries in Makassar and Surabaya. Another problem is marketing access. The seaweed cultivators in Baubau do not know how to reach the market by themselves. This is because their skills and knowledge levels are really low. This also raises an additional problem. Seaweed cultivators are cheated on and used by the local traders because local traders will ask lower prices for harvests while the seaweed cultivators can ask for a higher price than the local traders are offering. So again, the level of skills and knowledge of the seaweed cultivators is really low. This puts them in a powerless position with regard to the local traders and the government.

From the interviews that were conducted in Baubau it became clear that the local government is already spending more and more time on training the seaweed cultivators. Only there is one problem with regard to this training, it is not clear what the effectiveness of this training is and if it works⁷⁹. For a training to be effective, supervision on a regular basis is necessary to maintain the development of the region. At the moment this is not the case. For example, most of the seaweed cultivators do not know how to use fertilizer. When using too much fertilizer the seaweed plants will die and the people have to move to other areas to start-up their business again. Another example, a lot of seaweed cultivators still use plastic ropes, mainly because it is cheaper and easier to get. What the seaweed cultivators do not know is that by using plastic ropes they will affect the quality of the seaweed. These two examples confirm that the level of skills and knowledge of the cultivators in that region is too low. At the moment the local government in Baubau does not have any power and

⁷⁷ Interview with Kiky

⁷⁸ Interview with Mr Guspika

⁷⁹ Interview with Mr Jana Anggadiredja



knowledge to train these seaweed cultivators the right skills and knowledge. That is why outsiders (people from outside the region) come to Baubau to give training and give advice to the seaweed cultivators. These outsiders get invited by the central government to give training in developmental areas.

An effective form of training is in form of group discussions between the different local seaweed cultivators⁸⁰. During these discussion-s they talk about all sorts of issues, like how to use the proper material for cultivation and how to deal with the Ice-Ice disease. So the seaweed cultivators are working together and discussing these issues based on their own experiences. They also have to choose a group leader who will lead the discussion in the group. These groups discussion are held every two weeks for approximately one hour. There has to be a supervisor present who observes the group discussions and makes sure that everything is going as planned. These supervisors are often external agents.

5. Entrepreneurship in Sulawesi

Indonesia knows different kinds of entrepreneurs. The entrepreneurs in the region of Baubau often have a background at the governmental institutions and have been an entrepreneur for a very long time. One of their main activities is to teach seaweed cultivators how to produce seaweed in the best manner⁸¹. They do this by providing the seaweed cultivators with knowledge, skills and training. These entrepreneurs are often also involved in the process of the collection of seaweed from the same cultivators they tutored. So they are teaching people the right skills and also collecting seaweed from them to sell on the local market. By working in this way entrepreneurs continually find new possibilities in how to improve the production and the quality of seaweed. So there is a cycle of activities, because this information will be taught again to the cultivators.

However, there are also people with a different background. Local buyers and sellers are often also active as an entrepreneur⁸². These entrepreneurs started, in most cases, as a seaweed cultivator themselves. Then after this they might have the option to start as a local collector. As a local collector there is also the option of becoming a warehouse owner for a group of local collectors.

Government support for entrepreneurs

The local government in Baubau also provides training for entrepreneurs⁸³. A couple of times per year the local government organizes get-togethers of all local entrepreneurs at the Mayor's

⁸⁰ Interview with Mr Jana Anggadiredja

⁸¹ Interview with Mr Eli (Part II)

⁸² Interview with a warehouse owner

⁸³ Interview with a warehouse owner



residency. They all meet over here and they receive training in entrepreneurial skills. For example, teaching them different ways to earn more profits. So the local government is doing a lot for entrepreneurs in this region.

The local government and banks do not support entrepreneurs in terms of money⁸⁴. These institutions simply do not trust the entrepreneurs. They see entrepreneurs as risk takers, and they do not take them seriously. The local government and banks, at the moment, rather give big sums of money to large companies then giving little amounts of money to small entrepreneurs. However, this also brings along more risks because when the banks and the government give these large amounts of money to the bigger companies, the risk of losing it is also larger. In other words, when a large company makes a bad decision with this money, this will cost the bank and/or the government a lot. But when they would invest a smaller amount of money in the entrepreneurs, the risk of losing large amounts of money is also smaller.

Problems and weaknesses

The government in Indonesia currently does not have a good sense of what entrepreneurship really is⁸⁵. Being an entrepreneur also means taking risks. This is not what a local government should do. The local government is there to create a stable livelihood for everybody in the region.

A related issue is that it is difficult how to define the word 'entrepreneur'. In current literature a lot of different definitions of entrepreneurship are used⁸⁶. And you can also see this problem with regard to the Indonesian government. The government does not have a good idea who the entrepreneurs in this country really are. At the moment the government defines entrepreneurs as all the people who are selling the products on the side of the street, like selling food, electronics, and souvenirs. According to the government Indonesia has 40 million entrepreneurs on a total of 200 million people living in Indonesia. But those people are not really entrepreneurs. An entrepreneur is, however, somebody who has a good idea, can translate this idea into a business plan and then build a management cluster around this idea. After this an entrepreneurs should find the right location to manufacture his product/service and find the right human resources to manage it. These are the real entrepreneurs and the government should spend more time and money to foster these people. But the government does not really encourage people to become an entrepreneur and they do not support the already existing entrepreneurs.

⁸⁴ Interview with Mr Sasongko

⁸⁵ Interview with Mr Guspika

⁸⁶ Interview with Mr Sasongko



There is no best definition for the word 'entrepreneurship' and a definition should be used that fits a situation best⁸⁷. But the government sees all local salesmen, like the people selling food next to the street, as entrepreneurs. The government uses a too broad definition of entrepreneurship because they see all people who own and/run a business as an entrepreneur. So this definition is based on number of assets and employees rather than on capability. The government should also focus on intrapreneurship on this matter. In this way the government will look more at the potential of people and how to increase their capabilities in entrepreneurship. The BPS (the statistical office of Indonesia) makes a distinction between three different levels of enterprises, these are: small (1-14 employees), medium (15-99 employees), and large (100 and more employees). The medium and large enterprises normally have a good connection with the government, but the small enterprises don't have this connection. These small enterprises (entrepreneurs) are normally owned by people with a low level of education when you compare them with the people working at the medium and large enterprises. So the need for training, education and skills is highest at the lower level: the small enterprises. But the central and local government don't see this and they want to use their own program that is more focused on the bigger enterprises. However, the central government is paying more and more attention on entrepreneurship in Indonesia. They create possibilities for students to go to universities and to do an internship at the larger companies. But they mainly focus on the new generation of people and less on the already exiting workforce with an education level that is too low.

6. Leadership in Sulawesi

To establish a strong collaboration between a wide variety of parties (central government, local government, local seaweed cultivators, industries, local traders and educational institutions) a greater coordination should be established in the region⁸⁸. A collaboration like this can only be managed when the region has a strong leader. The current form of leadership in a big part of the regions in Indonesia is really weak. The Mayor should be the person who is in charge of the region, but in most cases the Mayor's influence is relatively low. A good Mayor should not only have a connection with its government, but it should also have a strong connection with the local people in the region. Good examples of good Mayors are the Mayors of Yogyakarta and Solo. These are local governments without corruption and where there is a good connection between the local government and the local people. But unlike these cities there are also the people in the somewhat poorer areas, like Baubau, and they are more easily influenced by people who have money. This is a bad development, especially when these richer people have ties with criminal activities. These

⁸⁷ Interview with Ms Indarti

⁸⁸ Interview with Mr Guspika



people are putting pressure on the Mayor and about his leadership. As a result the Mayor will respond with government actions that are based on non-scientific data but more on the influence of the richer people.

Leadership style

According to the interviews that were conducted in the region of Baubau, the best leadership style should be democratic⁸⁹. But there is a big problem on this matter, because most people in that region are not highly educated. That is why, according to the interviews, a visionary leadership style is better suited to the conditions in the region of Baubau because it can help provide the right direction related for its regional development. In addition, the Mayor of Baubau should be the one who will lead this region in the right direction. The current mayor of Baubau is a member of the Party that is currently controlling the central government. This means that the Mayor's policy is in line with the policy of the central government. Consequently, the collaboration between the central government and the local government in Baubau is rather good. This makes it easier to implement programs that are developed by the local government because the level of trust between both governments is higher. Characteristics of the Mayor of Baubau are:

- A political leader who shapes the context of progress and projects
- A leader who anticipates and helps to shape change

Structure

The best approach to handling the changes in the region of Baubau is having a top-down structure because this structure is more effective and easier to implement with regard to the current conditions in the region⁹⁰. But not all policies should be top-down. At the moment there is a force active in Indonesia now known as the Musrembang-mechanism (Deliberation and Development Planning). This mechanism contains that the public can participate in the development planning process by proposing programs that would have to get government attention through Murembang-forums. During these forums the public can interact with local government representatives. On the basis of the outcomes of these forums the local government will firstly adjust the development planning. After the central government approved of this adjusted development planning the local government will adjust its planning and budgeting accordingly.

7. Human Coordination in Sulawesi

According to the field research that was conducted in Indonesia, a lot of interviewees also said that the possibility of a cooperative would be very useful. This research indicated that there are

⁸⁹ Interview with Kiky

⁹⁰ Interview with Kiky



already a lot of farmer groups active in the region of Baubau. These groups consist of approximately 5-7 families and will contain roughly 20 persons⁹¹. According to the interviews, trainers perceive it as easier to train knowledge and skills to groups of people instead of individually. In this way they can get a bigger reach with their training and education. However, these groups of farmers should form an even bigger group and work together as one unit⁹². For this to establish there should be new legislation to structure this process more. One of the main problems that the farmers are coping with at the moment is getting capital for their farming. When they are going to work together as a group it will be easier for them to gain access to financial institutions and government agencies. For the government it will also be more convenient to work with cooperatives because it will be easier to monitor the development of businesses. Working in cooperatives would also be beneficial for local buyers and sellers⁹³. Therefore, the local government is already developing associations in different regions so that there can be a place where the local government and community can come together to discuss issues with regard to seaweed cultivation.

The seaweed cultivators in Wakatobi confirmed the fact that they are already working in some form of cooperatives already⁹⁴. They also mention that they are not dependent on the big seaweed processing industries. They can lend money from the government without interest to set-up their own businesses. The Mayor of Baubau mentioned that one of the reasons to form cooperatives is to reduce the amount of conflicts between the cultivators. The seaweed cultivators in Baubau confirm this statement and they say that there is almost no conflict between cultivators since they are working in cooperatives. The cooperatives they formed are even bigger than mentioned before, approximately 10 families. The gatherings between the families are led by the heads of these families, in most cases the males. In case of a conflict, an external agent, in this case from local government, can be consulted.

The level of collaboration between the seaweed cultivators strongly depends on the size of the families and the amount of work that has to be done⁹⁵. When a family has a lot of members the amount of collaboration between the cultivators is not that high. When families are smaller, more seaweed cultivators are working together, especially when a large amount of work has to be done. These cooperatives are not structured and it is also not clear who is working with each other and who is not. There are a lot of informal arrangements between the cultivators, they see their

⁹¹ Interview with Mr Eli (Part I)(Appendix

⁹² Interview with Kiky (Appendix)

⁹³ Interview with Mr Eli (Part II)

⁹⁴ Interview with seaweed cultivators in Baubau (Appendix

⁹⁵ Interview with Hardy Laomo and Mr Helmi



collaboration more as a friendship rather than an arrangement⁹⁶. So these collaborations are more informal than formal. That is also one of the main reasons that there is almost no conflict between the seaweed cultivators when they are working together. This is a good foundation for a cooperative to work.

Besides the above mentioned reasons, there is also another reason for cultivators to work together. The local banks are also an important factor⁹⁷. Local banks will not give loans to seaweed cultivators individually, they have to form a group of around 10-20 people and only then they can apply for a loan for the whole group.

Conflicts between cultivators can also be reduced⁹⁸. There are more and more conflicts between cultivators because they are stealing each other's crops. When the amount of conflicts is reduced, there will also be an improvement in the transfer of knowledge and skills.

The farmers are also cultivating their seaweed really close to each other in small areas⁹⁹. To avoid conflict in this area a lot of agreements have to be made. Therefore, the seaweed cultivators discuss with each other where and when to cultivate and harvest. There are almost never conflicts during these discussions.

At the moment the local government in Baubau is already engaged in the development of cooperatives¹⁰⁰. The local government is encouraging and stimulating the seaweed cultivators to work together in cooperatives. In this way, the local government can reach them better for training and other facilitation. In Kendari local buyers and sellers already come together to discuss important issues with regard to the cultivation of seaweed. The only interference the local government has is the setting-up of a minimum price. So the local seaweed cultivators are not really protected against the heavy price fluctuations. The local government wants to change this structure and it wants to negotiate with the local buyers and sellers about pricing and production. These developments are still on-going. The ultimate goal is to bring all the relevant parties together to discuss the current situation with regard to the seaweed industry. Start working with cooperatives would be a first step in this process.

⁹⁶ Interview with the seaweed cultivators in Wakatobi (Part II)

⁹⁷ Interview with warehouse-owner and Mr Mukmin

⁹⁸ Interview with the Mayor of Baubau (Appendix

⁹⁹ Interview with the seaweed cultivators in Wakatobi (Part I)

¹⁰⁰ Interview with Mr Eli, Mr Feto Daud and Mr Ali Hassan



There already exists a sort of seaweed cooperative at the moment¹⁰¹. This cooperative functions as an intermediary between the local government and the cultivators. This cooperative looks like a business association. However, not a lot of people join these associations, and some of them do not even know they exist. Others want to have a compensation for joining these associations. So a big problem with regard to starting collaboration is motivation, intrinsic and extrinsic.

One of the parties that oppose the development of cooperatives are the local buyers¹⁰². The local buyers sometimes work with groups of cultivators and sometimes they do not. However, the local buyers prefer to work with the cultivators individually. This is because the cultivators deliver different amounts of seaweed and have different harvests. When dealing with groups of people it would be hard to divide the money between the seaweed cultivators in a cooperative and this will cause conflict.

¹⁰¹ Interview with Nurul Indarti

¹⁰² Interview with warehouse-owner and Mr Mukmin



Appendix 3: List of interviewed persons

17/10/2010: 9.00 – 11.00: Kiky

Kiky was part of the LERD team that went to the university of Groningen to develop an Action Plan for the region of Baubau. Currently, he is doing his Master's Economy in Makassar. When he is finished, he will return to Baubau to become part of the local government again.

18/10/2010: 11.00 – 12.00: Mr Djudul and the Mayor of Baubau

Mr Mukmin's boss is Mr Djudul and he is the Head of Tourism. He was also present during this meeting.

19/10/2010: 11.00 – 12.30: Mr Suhufan

During our visit to Bau-Bau we were invited by the mayor to join a discussion and presentation meeting at the mayor's residence today. This meeting contained a presentation of two researchers from the University of Indonesia in Jakarta about the cultural and social aspects in the region of Bau-Bau and the influence this has on a changing local environment. After this presentation an informal discussion will be held with regard to this presentation. During this meeting I had an informal conversation with Mr Suhufan. Mr Suhufan is the Secretary of the Bau-Bau region.

19/10/2010: 12.45 – 13.30: Mr Wahu

After the presentation and the mayor's residence we had an appointment with Mr Wahu. Mr Wahu is a researcher and he is conducting an investigation about the cultivation of seaweed. Previous research matter was already done by Mr Abduh and Mr Maruf from the University of Kendari (Universitas Haluoleo Kendari – UNHALU). Mr Waruf is their successor.

20/10/2010: 12.00 – 14.00: Seaweed cultivators in Baubau

The seaweed cultivators in the region of Sulaa mostly work in co-operations. They are independent seaweed cultivators, so they are not obliged to sell of their harvest to the bigger industries in Surabaya or Makassar. They can lend money from the government to set-up their business. They have to pay this money back to the government but they do not have to pay interest.

21/10/2010: 12.00 – 14.00: Seaweed cultivators in Wakatobi

The main part of my research will be conducted in Bau-Bau. But it is also interesting to see how the cultivation of seaweed is organised in another region. That is why we went to the Wakatobi Islands to conduct interviews over there. In this way it would be interesting to compare the situations of both regions. The second interview that I had with a local seaweed cultivator in Wakatobi I had in another village. I tried to compare the results I got from the other seaweed cultivator in Wakatobi and with the seaweed cultivators in Bau-Bau.

21/10/2010: 14.00 – 15.30: Mr Hardy Laomo and Mr Helmi



During my visit to the Wakatobi Islands I had an interview with Mr Hardy Laomo and Mr Helm. Mr Hardy Laomo is the Secretary of the region Wangi-Wangi and Mr Helmi is Head of the Department of Treasury in that region and the right hand of Mr Hardy Laomo. Since Mr Hardy Laomo is an important government official in this region I am going to ask him some question with regard to local government issues.

22/10/2010: 21.00 – 22.30: Mr Eli

At first this interview was going to be with Mr Hardy and Mr Aliman. But they cancelled their appointment one hour before we had scheduled. Unfortunately, this was my last opportunity to speak to them both. I asked Mr Eli if he can try to answer some questions for me with regard to the professions of Mr Hardy (Head of Law in City Hall) and Mr Aliman (Head of Staff in the Financial Department) and also with regard to the functions they had during the LERD course in Groningen. He would do his best.

23/10/2010: 10.00 – 11.00: Mr Eli, Mr Mukmin and local warehouseowner

Today we went with Mr Eli and Mr Mukmin to one of the warehouses in Bau-Bau. In the region of Bau-Bau there are approximately 5 to 6 warehouses. Mr Mukmin and Vivi translated for me. The warehouse collects seaweed from local seaweed cultivators in the region of Bau-Bau. Afterwards, the warehouse sells this seaweed to the bigger industries in Surabaya.

23/10/2010: 12.00 – 13.00: Feto Daud & Ali Hassan

On one of the sheets I received (Jalur Pemasaran) from Mr Eli there is information about the current activities Mr Feto Daud and Ali Hassan are currently working on. Mr Feto Daud is Head of Industry & Trade and he is the boss from Mr Hassan and Mr Kiky.

19/11/2010: 8.00 – 9.30: Guspika

Mr Guspika is one of the co-founders of the LERD concept. He also supervised the LERD team in Bau-Bau. He works in the Bappenas office in Jakarta. Before starting the interview I first asked Mr Guspika if he could describe in a little bit more detail what his current function entails. Mr Guspika responded with telling me that at the moment he is the Senior Planner in the Ministry of National Development Planning (Bappenas). This means that he supervises national planning development. He showed me the position of his office in an illustration on a whiteboard that he later explained to me.

19/11/2010: 12.00 – 15.00: Andreas Budihardjo & Hendro Adiarso

During my stay in Jakarta I had an interview with Prof. Dr. Andreas Budihardjo and MBA Hendro Adiarso from the Prasetiya Mulya Business School in Jakarta. Prasetiya Mulya is known in Indonesia as the best and most prestigious schools in Indonesia. Prof. Dr. Budihardjo is at the moment the director of graduate programs (see business cards appendix). He studied in Groningen in the Netherlands and was also part of a similar research (Work Group Matching) project between a Dutch and an Indonesian student in 1998. The name of the Dutch student is Christiaan Koster. During his time in Groningen he did a comparative study on Dutch and Indonesian managers' values and decision making. After this research Andreas returned to Groningen and got his PhD in Business Administration. He returned back to Indonesia where he became a professor in HRM. Mr Adiarso has also visited the Netherlands. He got his BSc at ITB and his MSc at the University of Twente. At the



moment he is counselling a group of students who are doing research on a new growing system for seaweed in the region of Keramba.

19/11/2010: 16.00 – 18.00: Jana Angadiredja

Mr Laseur introduced me to Prof Dr Jana Anggadiredja after meeting him at a conference in Groningen. Jana works for a company called BPPT (Badan Pengajian Dan Penerapan Teknologi or in English: The Agency for the Assessment and Application of Technology) and he is president of the Indonesian seaweed association. Jana also trained seaweed cultivators in Bau-Bau and he knows this region very well.

20/11/2010: 10.00 – 11.00: Bimo Sasongko

Mr Sasongko is a lecturer on Entrepreneurship at ITB (Institut Teknologi Bandung). He also has his own company (Euro Management) that provides opportunities for Indonesian students to study abroad. At the moment the company only arranges exchanges to Germany and France. But they are now also focussing on other countries, like the Netherlands. I wanted to do an interview with Mr Sasongko because I would really like to know a little bit more about entrepreneurship in Indonesia. My interviews mainly consist of meetings with people from the government. To broaden my view I wanted to know how a business man, like Mr Sasongko, thinks about the issues regarding leadership and entrepreneurship in Indonesia.

1/12/2010: 8.30 – 10.30: Nurul Indarti

Before I left Groningen my supervisor, Bartjan Pennink, told me that I should visit Yogyakarta during my stay in Indonesia. Bartjan knows some interesting people in the Universitas Gadjah Mada, in Yogyakarta. that are specialized in entrepreneurship and management studies. The first person he suggested me to meet was Nurul Indarti. Nurul is a lecturer at the Universitas Gadjah Mada in management and entrepreneurship. She also studied in Groningen for a while and she focused her research on knowledge management.