

Achieving Local Economic Development by Generating Knowledge Eagerness

Case Study of a Knowledge Sharing Café in Kerinci, Central Sumatra

by

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ABSTRACT

In this master thesis project, the facilitators of outside knowledge eagerness are investigated by looking at the current ways of inside knowledge sharing of cinnamon farmers in isolated areas in Indonesia and the potential implementation of an outside knowledge sharing initiative. The case that is investigated is the proposed “Knowledge Sharing Café” by Tripper in the Kerinci district on the island of Sumatra. Conclusions are drawn on two levels. A new model is being contemplated for outside knowledge sharing initiatives like the Café by looking at current ways of inside knowledge sharing and (potential) outside knowledge eagerness. Also, based on these findings, a new framework on empowerment and local economic development is presented. This new framework is based on using the contents of outside knowledge with the vehicle of traditional ways of inside knowledge sharing. The Stimson (2005) framework that focused on endogenous factors like the role of entrepreneurial role models is supported. At the same time it is being extended with the statement that when they are combined, inside and outside knowledge can form a more powerful tool in achieving knowledge eagerness, empowerment and local economic development. The findings provide support for the neo-endogenous model for rural development.

Key Words: Knowledge Eagerness, Inside, Outside, Sharing, Empowerment, Local Economic Development

EXECUTIVE RECOMMENDATION

It turns out that farmers are indeed quite opportunistic: information about markets, where to sell their crops, and how to obtain micro credit are most important for cinnamon farmers in Kerinci. Next to these financial aspects, information about crop diseases how to make the best seeds and a research lab to test the pH-level of their soil are valued high as well. At the same time, the people in the area have been disappointed in the past by outside initiatives, so they can be quite suspicious. This is why the implementation of the concept should be both fast and should go in close cooperation with local Adat people, government and Tokoh Masyarakat. These parties, however should only have a legitimating and approval role, a legal role and an advisory role respectively to remain the Café to be independent and trustable for the people. The farmer communities should not be used, since not all the farmers are part of them and they sometimes apply their own rules when it concerns information, seeds or money sharing.

It becomes evident that the farmers would benefit greatly if they had a place where they could get the types of information that they need. However, just providing an internet connection for farmers would not really benefit them. They depend on traditional ways of inside knowledge sharing: role models and people they already trust (Tokoh Masyarakat). Once they see that an idea works, only after a successful harvest of somebody else, will they start growing this crop themselves. This information sharing could take place in an elementary school, but this has the disadvantage of the commercial connotation that pesticide companies have established by giving their education seminars there. It appeared that people were very open to receiving new information in the form of this Café. This is why the Tripper Café or Pondok (in Indonesian) concept, when applied in a correct and fast manner, can be a successful alternative.

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ABBREVIATIONS

ADAT	Village elders (Tribe)
AKSC	Agri Knowledge Sharing Center
B4K	PPL run decentralized help for fishermen and duck farmers
BPS	Badan Pusat Statistik (Central Statistics Office)
FGD	Focus Group Discussion
GAPOKTAN	Farmer Community
INC	Incorporated
ICT	Information and Communication Technology
IDR	Indonesian Rupiah*
KM	Knowledge Management
KSC	Knowledge Sharing Center
LED	Local Economic Development
LERD	Local Economic Research Development
MRQ	Main Research Question
NGO	Non-Governmental Organization
PKM	Pusat Kesahatan Masyarakat (Decentral Health Service)
PNPM	National Program for Community Empowerment
PPL	Petugas Pertanian Lapangan (Government Farmer Help)
PRA	Participatory Rural Appraisal
RUHUSEF	Rural Humanity Services Foundation
TNKS	Taman Nasional Kerinci Seblat (Kerinci National Park)
WWF	World Wildlife Fund

*1 Euro = 12,200 IDR, approximately (www.xe.com)

*1 GBP = 14,300 IDR, approximately (www.xe.com)

CHAPTER 1

INTRODUCTION

When compared to urban areas, remote rural areas in Indonesia still have some catching up to do when it comes to development. This becomes especially clear when one takes a look at the government empowerment program that was initiated in 2007 where in total 834 urban sub-districts and 1,993 rural sub-districts were selected at the project start. This PNPM Mandiri project has the general goal to improve welfare of poor communities in Indonesia (PNPM Mandiri, 2007).

The focus in this research project lies with finding out the possibility and probability of achieving empowerment and local economic development by generating eagerness to obtain new outside knowledge of remote rural communities. The specific case concerns the implementation of one of the latest innovations in the field: a Knowledge Sharing Café in the Kerinci region in Central Sumatra in Indonesia.

Local economic development is best defined as the means to provide decentralized government agencies, NGOs and local communities with the opportunity to work together to improve the local economic conditions. It aims to encourage sustainable growth that is inclusive in nature (The World Bank Group, 2011). It is a curious area of research. Why some regions have developed themselves in terms of welfare, crop optimization, information, production, knowledge, medical facilities and technology, and others not, remains an interesting topic of academic debate. The four main models within rural development are the Agrarian, the Exogenous, the Endogenous, and the Neo-Endogenous model.

The findings in this master thesis are mostly in line with the prescriptive assumption of the neo-endogenous (Lowe et al. 1995) model for rural development. This assumption states that the focus of development programs should be based the enhancement of local institutional resources and cope with the external forces acting on a region. In other words, local rural development can be stimulated by making effective use of the fit

between both local needs and the contents of outside knowledge sharing and at the same time conveying the messages in ways that fit within the traditional ways of inside knowledge sharing. Only ways of inside knowledge or outside knowledge sharing are not enough, they have to be combined.

The Knowledge Sharing Café idea is to mix a bundling of local existing knowledge and disseminating it to other small farmers while at the same time raising their awareness and giving them opportunities to gather outside knowledge and resources by making use of role models and technology for agricultural and developmental purposes. The idea is to start the Café with one or two internet connections and a permanent staff member that is able to help the farmers with any questions they might have or support they might need, whether it be medical knowledge, technological knowledge, financial knowledge, market prices and knowledge, or communicative knowledge. If attitudes of farmers towards such a Café prove positive and usefulness and the probability of use will prove high, the Café will be provided by the Indonesian spices trading company Tripper Inc. It can be considered a social entrepreneurship program, which has the aim of (next to helping them) establishing an enduring partnership with small farmers in the region.

The Knowledge Sharing Café program, described above is, naturally, not without risk. As previous experience has learned (Heeks 2002) implementing technology and information systems in less developed areas always bears with it a considerable chance of *partial failure*, like with Thailand's Tax Computerization Project (Kitiyadisai 2000), or even *total failure* in the case of India's Indira Gandhi Conservation Monitoring Centre (Puri et al. 2000). The proportion of Information systems interventions that succeed in industrialized countries is already relatively low: around 20% (Heeks 2002). The evidence is plentiful indicating failure rates in developing countries may be even higher looking at the many practical constraints¹ in those countries. In order for the Café project to become a success, all the prerequisites for successful empowerment must be in place. To investigate whether this is the case, a Participatory Rural Appraisal approach

¹ Lack of technical and human infrastructure are named as common practical constraints for the implementation of IT interventions in developing countries (Heeks 2002)

(Chambers 1994) will be applied with the aim of learning more about the small farmers' attitudes, usefulness (information needs) and probability of use towards such a Café.

Although all the different conditions out of the four existing perspectives to achieve successful empowerment (Van Kammen 2010) may be satisfied, the probability of failure of empowerment initiatives is still relatively high due to a lack of eagerness to obtain outside knowledge. The most important constraint is introduced as a lack of 'readiness to change'. Since 'readiness to change' is a concept directly derived from the change management literature and is more applicable to organizations than to rural communities, this research project will define this construct differently. It will zoom in on what is introduced in the regional development literature as 'knowledge eagerness'. This new construct, and the role that the before mentioned Café as well as other facilitators can play in influencing it, are further elaborated on in the remaining sections.

The philosophy behind this research is closely linked to the recently much advocated (e.g. Gronroos and Ravald 2009; Ramaswamy and Gouillart, 2010;) stream of co-creation from the marketing literature. Only when local people, small farmers and small collectors actually become designers or owners besides merely users of the Café, it has a chance of becoming a success. This is why next to big collectors, NGOs, development experts, agricultural cinnamon experts, and others, the attitudes and perceptions of small farmers are gathered and analyzed to provide the new café concept a shot at actually empowering them. By observing and interviewing the farmers, this project aims to find out about small farmers' awareness of outside knowledge, their 'knowledge eagerness' and the potential that a Knowledge Sharing Café may have for raising both.

The importance of the present study is being stressed alongside five pillars. First, local farmers will be allowed to express a voice about the implementation of a future initiative in their area. Second, the findings of this research will prove to be an important step in the development of the academic knowledge about the role of knowledge sharing in empowerment and local economic development. Third, the company Tripper Inc will gain a better understanding of farmers' attitudes about the Café, which helps them in

deciding whether to actually implement the concept. At the same time, this improved understanding alone and a potential café as well, can form the basis of a long-term partnership between the farmers and Tripper based on trust and a secured supply of raw material cinnamon. Fourth, if this project will successfully be implemented and will eventually become a success, it may prove to be a modest step towards global economic convergence, since local people will become more aware of what is happening around them and are more actively taking part in it.

Marketing of supplier markets is the fifth and last important issue underlying the current study. Creating long term partnerships with suppliers is one of the main goals that Tripper Inc has when implementing a Knowledge Sharing Café in the Kerinci district. The company makes efforts to establish a better connection and reputation with smaller suppliers. At the same time, the Tripper Café will also bring about reputation improving benefits with its customers. Porter and Kramer (2006) explained the link between competitive advantage and corporate social responsibility (CSR). In short, they argued that if a company really wants to turn its CSR project into a success that helps both business and society in the most effective way, it needs to stick close to its core competencies in choosing and implementing the project. Tripper's core competency is that it is based very closely to the source and has excellent knowledge and networks in local areas in Indonesia.

By implementing a social project that is close to the source, like the Knowledge Sharing Café, this project fits well within Porter and Kramer's (2006) strategic CSR framework. This is why it will be relatively easier to leverage the marketing value gained with the current project at its customers and extra funding may be possible from interested parties. However, the main aim of the study remains finding out what kind of knowledge sharing, predominantly inside or outside knowledge, should be the focus in rural empowerment initiatives leading to local economic development. This results in the following main research question:

“Which kind of knowledge sharing may help rural communities in the best way in order to achieve knowledge eagerness and effective empowerment and why might this be the most effective way?”

CHAPTER 2

CASE STUDY: TRIPPER KNOWLEDGE SHARING CAFÉ

Trippler is a private company incorporated in California in 1995 by Frenchman Francois Bernard, originally focusing on exporting vanilla beans from Indonesia to the United States. Consequently the offering has been enlarged to trading, among others, nutmeg, mace, cloves, turmeric, ginger, and cinnamon. The last spice is central to the case study of Kerinci, presented hereafter.

Kerinci

The Volcanic Kerinci area in Central Sumatra is the location that provides both the highest quality and quantity of cinnamon in Indonesia. It stretches an area of 150,000 hectares and is situated in the provinces of both West Sumatra and Jambi (Central Sumatra). Within this vast area, the three main cinnamon locations are: Gunung Raya (Mount Raya, which is the largest source), Kayu Aro (Siulak) and Padangaro. For the last decade or so, it was never a problem for Trippler to obtain hundreds of tons of cinnamon per season from the Kerinci area. In recent times, a change has been noticed: cinnamon forests have started disappearing, farmers stopped replanting cinnamon trees, making it more difficult for Trippler to obtain a secured quantity of supply for raw cinnamon to be able to serve the increasing demand for its processed cinnamon produce (Bernard, 2010).

Cinnamon

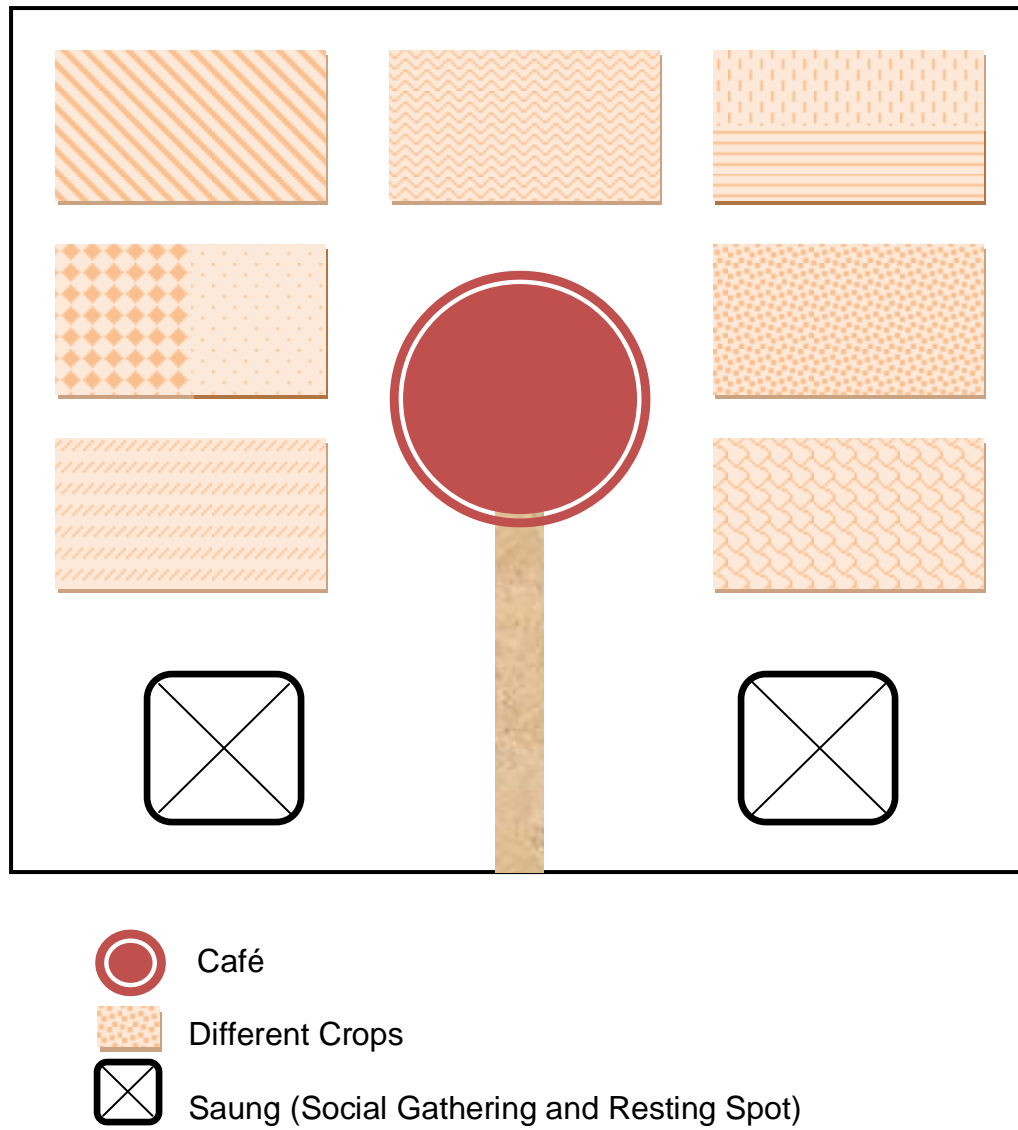
As cinnamon is a valuable spice and one of the main raw products that Trippler processed and exports, it is of high importance to the company. Prices have already risen steadily and an increasing worldwide demand is observable (Bernard, 2010). Trippler is concerned that small farmers and collectors do not always have access to these types of information. The company aims to raise local farmers' awareness of market prices and it wants to

establish a better connection and partnership with small Kerinci farmers by helping them in achieving empowerment and local economic development.

Knowledge Sharing Café

The company thought of the following solution to stimulate local economic development and create a better partnership with local people: implementing a Knowledge Sharing Café. Tripper wants to buy a piece of land of about 5-6 hectares, place a small Café in the middle where people can get free water and free coffee. It will be a neat and social place where students and experts can stay overnight to give education and provide examples of crops that will be grown on the land surrounding the Café. Next to this a computer will be equipped with an ADSL Internet connection, a hybrid person (Heeks 2002) will be hired to act as the bridge between the farmers and the Internet (outside knowledge). Possible questions that farmers can ask are: what is the current market price of cinnamon, what does the demand for cinnamon and other crops look like? These types of information are readily available on the internet (e.g. www.foodnet.org, www.ipcnet.org, www.easy-forex.com/commodities), but Tripper assumes they are not available to the farmers at the moment. This is one way of outside knowledge reaching the area. But, the ideas behind the Café are bigger: Mr. Bernard wants to make this a place that can serve a large societal benefit for the region in the future. Room should be given to many different purposes. For the sake of the role of knowledge sharing in development, my research was confined to this specific element though. Financing of the Café will take place through both internal and external funds. Tripper will be responsible for sustaining the project. Together with its partners, external funding will also be possible for the initial investments (buying the land and building the Café). Figure 1 below provides a schematic top view of the basic Knowledge Sharing Café idea.

Figure 2.1 Schematic Top View of the Tripper Knowledge Sharing Café Idea



CHAPTER 3

METHODOLOGY

3.1 Research Objective

The research objective of this master thesis is threefold: 1. Develop a theoretical framework for local economic development based on generating outside knowledge eagerness; 2. Empirically test theories about the role of inside and outside knowledge sharing in local economic development and develop a new conceptual framework; 3. Based on this new conceptual framework, assess the potential for implementing a knowledge sharing initiative in Kerinci, Sumatra for the management of Tripper.

3.2 Selection of Cases

Cases are selected within the population of Kerenci, West Sumatra. This community consists of approximately 1200 farms, of whom 800 use traditional methods to grow cinnamon. 400 farmers have stopped using pesticides and changed to organic cinnamon growing. These 400 farmers represent the population of the current case study. Within these 400, both individuals and certain groups will be selected to interview, observe, and /or take part in focus group discussions. Individuals can be viewed from the Basic Needs and Human Capital perspective. Groups are observed in light of the Decentralization and Local Institutional Capacity Perspective.

In accordance with Glaser and Straus (1967, p.45) an approach of theoretical sampling is used. This is pragmatic in nature: ease of access, travel time, the list of villages that can be visited in the available time are steering the selection of villages. New sites are chosen. Depending on the outcomes, new cases are selected that may be interesting to investigate whether the findings hold in a new context (Flick 2006, p. 125).

3.3 Research Design

The principle of triangulation will be used in order to arrive at the necessary credibility and trustworthiness (Van Aken 2007) for the research. Triangulation involves a process of combining different types of qualitative research methods in a way that they complement each other (i.e. the weaknesses of one method must be compensated by

making use of the strengths of the other) (Flick 1992; 2004) In the current research, triangulation is guaranteed by making use of three different methods of qualitative data collection: observations, semi-structured interviews and focus groups.

Observations

First, observations will be made as to whether local farmers have satisfied their physiological needs and appear to be in good health (basic needs perspective). Second, questions will be asked about literacy and education (human capital perspective) characteristics. Also statistics will be gathered on the level of educational attainment. All information will contribute to observation reports in Appendix D and will be summarized in the first research question about the development status of the area and basic conditions for knowledge sharing.

Interviews

Since the Indonesian culture has a large emphasis on family and relation, there will be no “jumping” to the important topics, rather questions about family, history, and relations will be asked in order to introduce the questions properly, establish a bond with the people and, ultimately gain their trust. Next, the crops that local farmers grow at the moment are asked about including why these crops, why not others, etc. Considered are issues of where, how, why and what kind of information people obtain. This yields valuable information on the current ways of knowledge sharing. Also, questions are asked about openness to initiatives and outside sources of information. This also gives an indication of the types of knowledge they are interested in and thus, indirectly, what facilities a Knowledge Sharing Initiative should include and how it should be shaped. For a detailed interview question overview, please refer to the semi structured interview list in Appendix B.

To be able to find out about the true motivations of farmers to grow certain crops, an open-ended, semi-structured interviewing approach will be applied. According to Wickham (2002), such an approach enables the researcher to “specify the nature of the linkages between initial conditions and outcomes with greater precision than is possible

in large-n, quantitative studies”. Also, according to her, open-ended interviewing and participant observation facilitate the exploration of micro-dynamics, which are key to finding out about the motivations that play a role in the development of eagerness to obtain new knowledge of local communities, which have their own micro-dynamics, like Kerenci. These motivations are to be discovered and taken into the focus group discussions that form the second phase of the research.

Focus Group Discussions

In Focus group discussions, full use will be made of the Participatory Rural Appraisal (Chambers 1994) method, namely the types of knowledge that local people are interested in. These will form an important basis for the possible design of a Knowledge Sharing Initiative. Chapati mapping is one of the techniques that is applied for the reflection of the different relations and sources of trust, knowledge and power. The advantage of a focus group discussion is that people will come to a certain consensus, which means that the eventual idea and concept of the Knowledge Centre will be supported by a larger number of people, which enhances the chances of success for the project. Social entrepreneurship motivations behind the Café are explained by making use of the Indonesian culture of Gotong Royong, which was also used in earlier outside knowledge sharing implementations in Indonesia, e.g. the flood warning system in Jakarta (Wagemaker et al. 2011). I made use of a videotape to film the farmers. However I explained that the tape is purely meant for research purposes and because my knowledge of the Indonesian language falls short. I have thoroughly explained these issues to the farmers at the beginning of the discussions. Also, I explained that the personal details are for the eyes of the researcher, translator, and thesis supervisors only. None of the personal details will be given to Tripper or other companies or entities. Names have been changed where appropriate. Appendix E contains a transcript of the entire focus group discussions.

Qualitative Research

Since the nature of the research question relates to the identification and development of new `mini` theory, while building on and advancing earlier applied research models on

the topics of empowerment and local economic development, the project makes use of the grounded theory approach. This involves an open attitude towards the different stakeholders and their perspectives on the situation and this results in an open main research question and qualitative research methods are applicable (Jonker and Pennink, 2010).

Another important reason concerns the nature of the research question. According to Narayan (2005), most elements of empowering through local economic development, such as their mentalities, identities, perceptions, and ideas are hard to quantify into numbers without controlling and immediately explaining the circumstances in which these findings occurred. Because of this high context dependence in the research field of empowerment of local communities, a choice has been made to rely predominantly on qualitative methods.

CHAPTER 4

THE ROLE OF KNOWLEDGE SHARING IN LOCAL ECONOMIC DEVELOPMENT

4.1 Rural Development

Local Economic Development can be split into urban and rural development. Since this master thesis investigates the development of remote rural communities, the focus lies with this type of local economic development. The Stimson et al. (2005) model is applicable for both types of local economic development and this can be seen as the overarching model for both rural and urban development. According to Martinson and Schulman (2001), rural development in its most basic sense refers to “some change in the industrial base, economic infrastructure, and occupation structure which results in an overall improvement in the quality of life of rural residents”.

There are four different theoretical models on rural development. The first is the Agrarian model, which is solely based on agriculture as the source for rural development. The second is the Exogenous model which states that growth in rural areas only comes from

outside the rural area and by transferring successful urban elements, like industries, to rural sites in order to develop. Both the Agrarian and Exogenous model have proven to be insufficiently backed by recent academic research (e.g. Hubbard and Gorton 2011). The third is the endogenous growth model and Stimson et al. (2005) can be seen as some of the most important proponents of the endogenous model in both urban and rural settings. In his model on regional economic development, the interrelationship between the endogenous factors “Institutions” and “Leadership”, creates the necessary entrepreneurial spark that will start a virtuous circle of regional economic development. Specific local resources (including indigenous knowledge sharing) hold the key to a region’s sustainable development.

However this model is also not without criticism, such as the issue of control: many regions do not have enough autonomy over their own resources (Lowe et al. 1995) in order to make effective use of endogenous variables. According to Stimson et al. (2005), though, their model can be used to describe both urban and rural cases, since they use both types of examples in the argumentation. Keeping generalization purposes in mind, this is why it is very suitable to use this model as an overarching model for the endogenous growth theory for local economic development in this master thesis (Figure 4.1 below). The fourth model is the neo-endogenous growth model. This theory states development should be defined by local needs. It should be stimulated by making use of both endogenous and exogenous factors, thus from both inside and outside the rural community. This can be done by improving the institutional capacity of a rural area’s, e.g. by means of outside knowledge sharing initiatives (Hubbard and Gorton 2011).

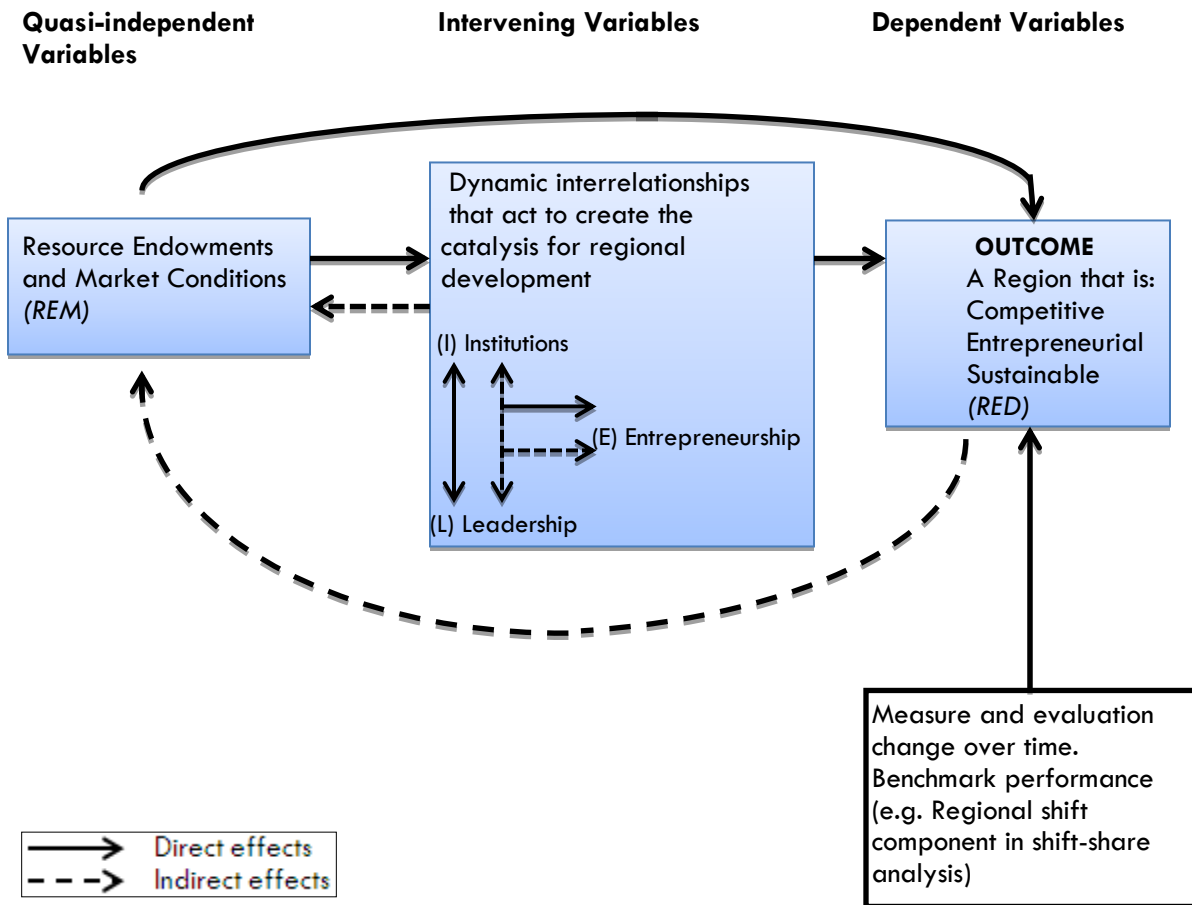


Figure 4.1 Stimson's Endogenous framework for RED (Stimson et al. 2005)

4.2 Empowerment

Empowerment is identified by the World Bank as one of the most important ways to help remote rural communities to develop themselves economically, distribute wealth more equally, and fight poverty (World Development Report 2001). In its most basic form, empowerment can be defined as any process that enables "autonomy, self-direction, self-confidence, and self worth" (Alsop and Heinsohn, 2005; Narayan, 2005, p.3). Empowerment usually works through the following process: local people are exposed to new knowledge and when they react positively, this sharing of knowledge raises peoples' awareness about how to improve their personal and business life and the quality of their living conditions. In other words: empowerment is one of the essential means to achieve development.

4.3 How to Assess Effectiveness of Empowerment Initiatives

Success of a rural development initiative in the past has been defined rather subjectively: the success or failure can and should not be seen in isolation, but has to answer the question: “success in *whose* eyes?” Previous researchers who scrutinized the implementation of Information Systems practices in rural development cases, for example, have more often than not failed to ask the question of “*whose* goals are unattained?” in order to appropriately address the subjectivity of their verdict. To deal with this, researchers should recognize this subjectivity rather than neglect it and should deal with multiple stakeholder groups to come to a comprehensive conclusion. Once all key stakeholder groups that are identified perceive the implementation of a new system to have brought benefits to them, it may be considered a success (Heeks 2002). The present research deals with this issue by undertaking interviews with a range of different stakeholders with an interest in both the geographical area as well as the area of research (see APPENDIX A) for a detailed overview of all the relevant stakeholders that have been interviewed.

Van Kammen (2010) developed a new conceptual framework (Figure 4.2) to assess the potential effectiveness of empowerment on group, community and locality level initiatives in rural underdeveloped areas, in her case: Central Kalimantan, Indonesia. This new framework was created by taking four perspectives on empowerment of remote area communities: the Basic Needs Perspective, the Human Capital Perspective, the Local Institutional Capacity Perspective, and finally, the Decentralization Perspective. She argued that one should not just look at empowerment from one of these angles, rather one should integrate the four, and conditions from all four perspectives should be on a satisfactory level before we can achieve successful empowerment in local remote area communities. She concluded with the statement, that although all conditions from the four views were met, it was still possible that empowerment is not successfully achieved. For empowerment to occur, a certain “eagerness to obtain new knowledge” needed to be present or to be developed. Outside the four main groups she created a new construct: readiness to change.

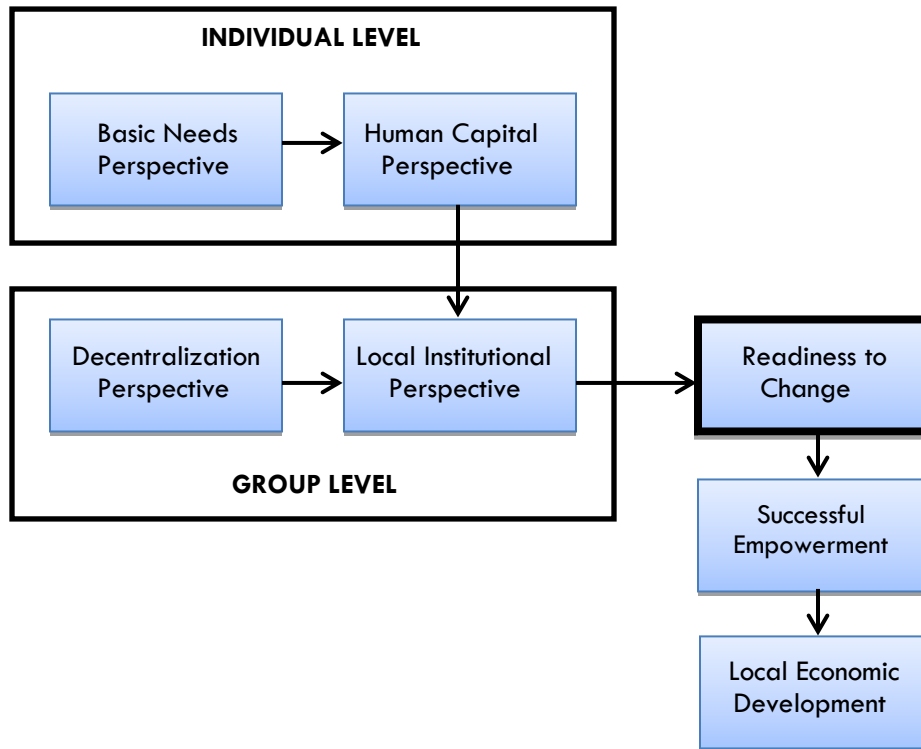


Figure 4.2. Simplified Model Van Kammen (2010)

4.4 Barriers to Empowerment

Barriers to empowerment appeared to be change reluctance-related and predominantly cultural, since the basic needs (perspective) and sufficient health care and education (Human Capital Perspective) were provided. It was found that if local people believe that their situation is just fine, it becomes extremely difficult to make them aware of the urgency to obtain new knowledge with the goal to increase their productivity or to diversify, which would have a positive effect on their overall average income. This was especially true if these rural communities showed little awareness and knowledge of other areas. Once they become aware of the differences, changes are possible.

This implies that providing information and exposing people to practical ways how to change their life increases their readiness to change and their possibilities to be empowered:

“If the local people believe their situation is just fine and they have enough money for living, it is very hard to increase productivity so that their income will increase. If they are just unaware of the possible changes, the story changes: ...providing information and

exposing them to other cities that are more developed ... might open their eyes that local economic development in their region is highly desirable.”

(Van Kammen 2010).

As a recommendation, she states that LERD Training should be given to local people in an urbanized and relatively wealthy developed area like the city of Bandung. The problem here lies, again, with feasibility and practical constraints: people would have to be motivated to leave the area where they have grown up and lived their whole life to obtain knowledge in which they are not interested: the attitudes of local people are not positive enough. This is how the first stone of the conceptual knowledge eagerness framework is being built: positive attitudes towards outside knowledge (initiatives) are seen as essential to achieve local economic development.

4.5 Knowledge Management

The whole process of sharing, disseminating, exchanging and creating knowledge are all part of the academic stream known as knowledge management. The central purpose of knowledge management is to transform information and intellectual assets into enduring value (Metcalf, 2005). Earlier knowledge researchers (e.g. Simonin 1999) mention that the most valuable and largest proportion of knowledge resides inside people's heads as tacit knowledge rather than being written down in explicit ways. This is especially true for knowledge in agriculture where a lot of good practices are transferred without being well documented in books, papers or extension documents. To manage this knowledge properly, ICT can be very useful (Rafea 1998). In fact, there are many information technologies that can be put to action with a knowledge management purpose. The following paragraph explains the role that technology can play in empowerment and development. The co-creation concept of the Knowledge Sharing Center is introduced afterwards.

4.6 Technology and Empowerment

The idea of using technology, such as Internet, in order to empower and develop people is not new. Füller et al. (2010) investigated the way in which Internet empowers

consumers to develop their own products and in this way bombard them to ‘owners’ of the products. Their results show that this *co-creation* concept can be an essential part of the success of e-business activities. However, the level of experienced empowerment depends on the design of the applied virtual interaction tool, the related enjoyment of the virtual interaction, the participants’ task and product involvement, as well as their own creativity and lead-user characteristics. Interestingly, the concepts of empowering through Internet go further than customers only.

4.7 Internet Cafés

Wheeler (2008) investigated the effects of Internet café’s in North Africa and the Middle East on the empowerment of women in this traditional masculine Middle Eastern culture. The main findings of her study provided support for three main outcomes of daily Internet usage in areas where previously no access was provided. The first outcome of increased Internet usage was an enhancement in both information access and abilities for professional development. The second winning of these interviewed women was that they were now able to expand and maintain social networks and social capital. The third outcome is in line with recent outbreaks and riots in Egypt, stating that Internet access has the ability to transform and in many cases enlarges social and political awareness.

4.8 Knowledge Sharing Centers

One of the most recent innovations in the role of knowledge sharing in rural development are the so-called Agri Knowledge Sharing Centers (AKSC). According to RUHUSEF (2011), these are locations that provide advisory services for farmers. At the same time, they provide the farmers with the necessary knowledge, skills, and attitudes in order to maximize their business` productivity. The Centers are aimed at developing a deeper trust and close relationship with the small farmer communities and encourage them to exchange their own knowledge among themselves at the same time by giving them opportunities for networking (RUHUSEF, 2011). In order to express the specific case of Tripper Inc and Mount Kerenci, and to not overly complicate the terminology, hereafter we will refer to the concept of the Center as a Knowledge Sharing Café, “the Café concept”, or simply “the Café”.

4.9 Knowledge Internalization Processes

Transfer of knowledge, whether it be via such a Café or via another way, can only take place in an effective manner when *re-creation* of the knowledge takes place at the recipient of new knowledge (Winter, 1995). To assess whether this has taken place, Kostova (1999) developed three indicators of what she calls *internalization* of knowledge: “the extent to which a recipient obtains *ownership of*, *commitment to*, and *satisfaction with* the knowledge that is to be transferred. First, when people feel that they have *ownership* and control over the new knowledge this increases the probability that they will actively absorb the knowledge by inserting their existing frame of references and mirroring it to the new knowledge. This way, they become owners of the new knowledge that was created by combining the existing with the previously unknown (Pierce, Kostova and Dirks 2001). Second, *commitment* towards new knowledge can be created when the recipients realize the value of new knowledge and develop competencies to use it (Leonard-Barton, 1990). Third, the *satisfaction* of recipients with new knowledge is a significant reducer of resistance (Leonard-Barton and Deschamps, 1988), stress (Ettlie 1986) and the not-invented-here syndrome (Katz and Allen, 1982).

Summarizing the previous paragraph, it can be stated that for effective transfer and re-creation to take place, an internalization of the new knowledge needs to take place through ownership, commitment and satisfaction. These elements need to establish a synergy process to allow internalization of knowledge. Internalized knowledge means that the knowledge is valuable, well understood and adapted by the recipients in a process that is termed *re-creation* in management literature (Cummings 2003)

The current study borrows this concept of re-creation from management literature and when applied to empowering rural communities by implementing a Knowledge Sharing Initiative, the co-creation construct is introduced. If a new knowledge sharing initiative will be implemented, first a detailed overview should be made of the current ways of knowledge sharing and the desired knowledge needs before implementation. Previous literature on local people`s knowledge demonstrates this by underlining the importance of

indigenous rural knowledge and its usefulness in inventing and adapting technologies and conditions (e.g. Grant & Sear 1999; Mikkelsen 1995; Van Kammen 2010).

4.10 Inside or Outside Knowledge Sharing

Previous researchers have either emphasized the need of outside knowledge to reach remote rural communities (e.g. van Kammen 2010) or they have stressed the value of indigenous knowledge and therefore advocated the need for the creation of a network for information sharing between local people (e.g. Nwokebia 2006). Both extremes should not be seen as mutually exclusive, but as part of a continuum (see Figure 4.3 below). The question for a new knowledge sharing initiative is: should the focus be on inside knowledge sharing or on outside knowledge dissemination?



Figure 4.3. Inside – Outside Knowledge Sharing Continuum

4.11 Inside Knowledge Sharing

Inside knowledge sharing means that people rely on endogenous factors (i.e. factors from inside their community) to satisfy their information needs. Stimson et al. (2005) propose that strong, proactive leadership (L) and intensive (private-public) cooperation in a region, combined with effective institutions (I), can create the necessary entrepreneurial spirit (E) in a region that will start the spark of the virtuous circle (Figure 4.1) leading to sustained regional development. Vaillant and Lafuente (2007) have provided evidence that chances of achieving local economic development are significantly higher in rural areas that possess entrepreneurial role models which act as inside knowledge sharing mechanisms.

4.12 Outside Knowledge Sharing

Knowledge eagerness is predominantly concerned with the eagerness of people to obtain new (outside) knowledge. This means that knowledge that was previously unknown and unfamiliar for local people now becomes available to them. This process can take place in many ways. One of those ways would be to implement a knowledge dissemination center in order to stimulate this eagerness: if there is little new outside knowledge available, this makes it harder for people to start looking for it. Heeks (2002) mentions that the implementation of any technology related intervention to stimulate outside knowledge sharing, especially in developing countries should at least address two main issues: Project Divisibility and Design-Actuality gaps.

Two significant design components of successful outside knowledge sharing systems implementations in the past are related to *divisibility* or the extent to which the design can be broken down into subcomponents. They are: *modularity* and *incrementalism*. Modularity means that only one function (e.g. market price information) is supported at the same time. Incrementalism means taking things step by step in order to avoid overcomplication (Heeks 2002).

Design-Actuality Gaps are concerned with the difference between the two most important stakeholders: the designers and the users of the new system. *Design*, in this instance, refers to the desired state where it wants to get us, while the *actuality* refers to where we are at the moment. Seven key dimensions are identified on which a gap can exist between the designer and the person that needs to make use of the new technology. These areas are: information, technology, processes, objectives and values, staffing and skills, measurement systems and structures, and other resources (i.e. time and money).

The technology of a new application can seriously harm the chances of success of a knowledge sharing initiative when it is too narrowly defined. Instructions are often too deep, creating *design-imposing applications*. A typical example is a decision support system. It consists of inherent inscriptions about the objectivity of information in the system, about the education and skill-level of the users, information needs of the users,

etc. Instead, a more shallow inscription is preferable, which is the other end of the continuum (Figure 4.4 below).



Figure 4.4. Actuality-Supporting vs Design-Imposing Technology Continuum (Heeks 2002)

An example is a word-processing application. Although it has some inherent assumptions about capacities of the users, these are less in number than was the case with the decision support system. These type of actuality-supporting applications are better able to close the design-actualization gap and increase the chances of success after implementation (Heeks 2002).

4.13 Conceptual Framework and Main Research Question

Now that “Readiness to Change” has been identified as a central concept in achieving successful empowerment (Van Kammen 2010) and Local Economic Development, it is time to investigate this construct further with the aim of decomposing it and hereby identifying its facilitators. Because “Readiness to Change” already is a much used term in existing change management literature, and it concerns remote area communities who have to gather new knowledge instead of business employees, the concept of “Knowledge Eagerness” is introduced. It is the central topic in this research project. Hereafter the black box, previously known as `readiness to change` is termed `Knowledge Eagerness`. A conceptual model will be created in order to graphically depict the different concepts influencing eagerness to obtain new knowledge taken from literature on the role of outside knowledge sharing in development (Figure 4.5 below).

By examining the case study (p. 25) of three rural areas in Kerinci, Sumatra, Indonesia, more insight will be provided in the facilitators of knowledge eagerness in outside knowledge sharing initiatives. Taking into account the basic needs and human capital

perspectives (Van Kammen 2010), the attitudes and information needs of local people in Central Sumatra, the different types of knowledge sharing: inside vs outside, the technology that will be used, the amount of design divisibility, are crucial to come to a complete understanding.

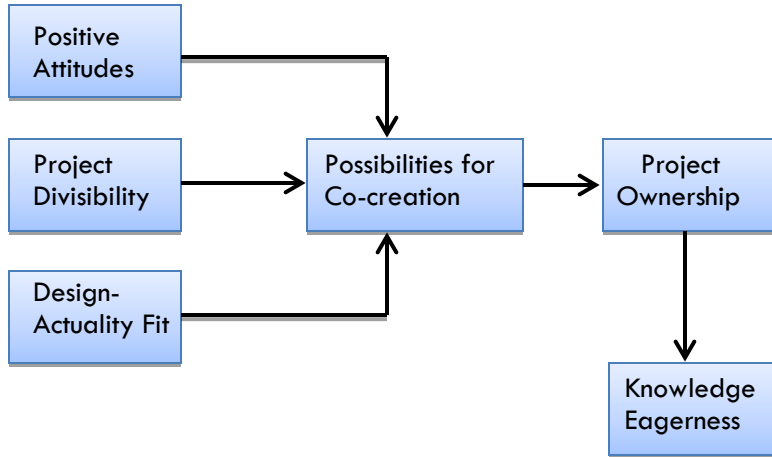


Figure 4.5. Conceptual Framework before Field Study: Assumed facilitators of Knowledge Eagerness

This study aims to investigate how rural isolated communities may be helped in the best way and to achieve empowerment and local economic development by stimulating their eagerness to obtain new knowledge, and what role a knowledge sharing initiative can play in this process. To find out about these elements, current conditions for knowledge sharing, ways of knowledge sharing, openness to new outside knowledge and local conditions will be investigated by means of the following main research question:

MRQ: *“Which kind of knowledge sharing may help rural communities in the best way in order to achieve knowledge eagerness and effective empowerment and why might this be the most effective way?”*

4.14 Research Questions

To be able to appropriately answer the above Main Research Question, it has been divided into the following sub questions:

Q1: *“How eager are Kerinci farmers to share inside knowledge with each other and to obtain new outside knowledge and which factors their knowledge eagerness?”*

Q1.1. What is the current development status of Kerinci and to what extent are the basic needs and human capital perspectives fulfilled in order to achieve knowledge sharing and the creation of new knowledge and empowerment?

Q1.2. How and where do local farmers or small collectors currently gather and share new knowledge (are they sharing inside knowledge or gathering outside knowledge)?

Q1.3. Which types of knowledge are local farmers and small collectors most interested in at the moment (what motivates them)?

Q1.4. What are currently the barriers for sharing inside knowledge and creating new outside knowledge for local farmers?

Q2: *“What should the most effective Knowledge Sharing initiative look like given the constraints of the case study with respect to the right balance between inside and outside knowledge continuum and the context for local improvisation to stimulate knowledge eagerness with the local farmers community of Kerinci, Sumatra?”*

Q2.1. Which alternatives are available to boost local farmers’ knowledge eagerness and how effective will they probably be?

Q2.2. Which characteristics should the knowledge sharing intervention contain in practice in order to match farmers’ knowledge needs?

Q2.3. How effectively can a Knowledge Sharing Café influence local farmers’ awareness and knowledge eagerness?

CHAPTER 5
EMPIRICAL RESULTS:
Observations, Interviews with Farmers and Focus Group Discussions

Introduction

The Conditions for Effective Knowledge Sharing: The Four Perspectives.

Taking elements from the “four perspectives” method applied by van Kammen (2010), the new model is created. On the basis of both secondary sources, (statistics), and primary sources (observations and interviews), this study first investigates to what extent the basic conditions are met that are needed according to Maslow’s theory of needs as a minimal condition for knowledge eagerness to occur. Next, the model will be extended and adapted, by looking at how knowledge is gathered within the community and based on semi-structured interviews and group discussions an overview will be presented on how knowledge sharing could be facilitated in the most effective manner for these people. After these basic conditions of the basic needs and human capital perspective are met, the attitudes, beliefs and knowledge of local people towards improving their way of living are elaborated upon in much more detail, since these form the part where new theory is being built. This concerns the area of knowledge eagerness and by combining a wide range of different methods (secondary sources, observations, semi-structured interviews and focus group discussions), a comprehensive new framework is created.

A comparison will be made between 5 villages in Lempur (A in Figure 5.1), the heart of the cinnamon area in the Gunung Raya sub-district of the Kerinci district in the province of Jambi which stretches from Central Sumatra until the east coast of this vast island. In order to evaluate these 5 villages more thoroughly where they stand on development, a cross-case analysis will be made with the village of Selam Paung (B) which also lies in the Gunung Raya District and Kayu Aro (C), which lies outside this sub-district but inside the district of Kerinci. Sungai Penuh (D) is the former capital and currently the biggest city in the district of Kerinci. In light of recent further decentralization politics, it has become independent of Kerinci and has sovereignty over its own city-based sub district (red colored area in Figure 5.1) inside greater Kerinci. In Figure 5.2, the relative

position of these areas can be viewed when compared with the greater Indonesian archipelago.



Figure 5.1. Province of Jambi, Island of Sumatra, Indonesia (A = Lempur, B = Selam Paung, C = Kayu Aro, D = Sungai Penuh, all lie in the western district of Kerinci)

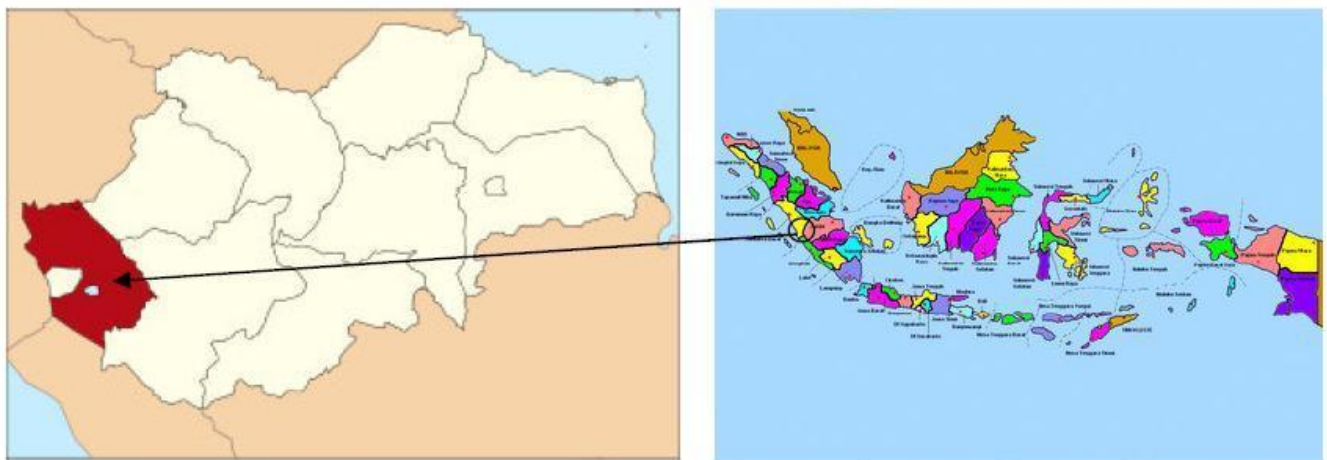


Figure 5.2. Relative Position Kerinci and Jambi in Indonesian Archipelago

5.1 Current Ways of Knowledge Sharing and Eagerness

Q1: *“How eager are Kerinci farmers to share inside knowledge with each other and to obtain new outside knowledge and which factors influence their knowledge eagerness?”*

Q1.1. To what extent are the basic needs and human capital perspectives fulfilled in different areas of Kerinci in order to achieve knowledge sharing and the creation of new knowledge and empowerment (i.e. What is the current development status and basis for knowledge sharing of Kerinci)?

Based on Observation Reports (Appendix D) of three areas: 5 Lempur villages, Selam Paung and Kayu Aro, in this section, statements will be made upon the development status viewed from the basic needs and human capital perspective. Afterwards, a conclusion is drawn to decide in which of the three areas, a knowledge sharing initiative would theoretically have the most impact.

Basic Needs Perspective & Human Capital Perspective

Lempur

Lempur's (A in Figure 5.1 above) level of Healthcare is relatively high. The five villages have close access to a Puskesmas (local health center) and there are certified doctors at close distance. Next to Lempur there is a large water source that provides clean water that people use for drinking and washing. Since most people own smaller or larger pieces of farming land and land is fertile, most people have enough food to live from. Average income is around 80 Euros per month, which combined with food from own crops, means that basic needs are fairly well covered. The village is rather isolated though. The closest internet connection is about 20 minutes away and power shortages occur on a daily basis. Almost all villagers (95%) have electricity. Education levels are relatively high, except for Lempur Hilir, which is the most isolated and abandoned of the five villages of Lempur.

Selam Paung

Selam Paung (B in Figure 5.1 above) is generally considered as less developed than Lempur. Access to healthcare is problematic and 50% of the villagers have to make use

of the public village sanitation facilities. Also income is considerably lower than in Lempur. People only have work when there is a harvest. Electricity and mobile phone connections are problematic and people are mostly preoccupied with fulfilling their basic needs. Education is in general quite poor: only 10% of the people have finished senior high school, 30% have no school education at all (Table, Appendix D).

Kayu Aro

Kayu Aro (C in Figure 5.1 above) is the area that is most developed in terms of healthcare, food and water availability, and mobile internet connections. This is mainly due to the excellent connection with the largest city of Central and West Sumatra: Padang. Kayu Aro is located on the main road to Padang, while Selam Paung and Lempur are more isolated, and lack these good road connections to Padang. All people have private sanitation and there are copy shops and there is an Internet Café. Education levels are relatively good and comparable with Lempur.

Summarizing the previous paragraphs, Selam Paung people are mainly worried about satisfying their basic needs. From Maslov's basic needs theory, it follows that these people would thus be less interested in new outside knowledge and it would be harder to increase their knowledge eagerness without first giving them sufficient food, water, and healthcare. Kayu Aro on the other hand can be seen as sufficiently and maybe even "too developed already". All needs are satisfied and because of the good connection with Padang and the availability of an Internet café and copy shops information is access to outside information is already available. When looking at theories of basic needs, human capital and access to outside information, we conclude that that for a knowledge sharing initiative to be successful, Lempur would be theoretically be the most effective place of the three areas in Kerinci.

Q1.2. How and where do local farmers currently share or gather knowledge (i.e. Are they mostly sharing inside knowledge or more active in gathering outside knowledge)?

In this part, first a categorization of the types of knowledge sharing that take place the most, is being made: inside vs. outside knowledge (see section: “The role of knowledge sharing in development”). Next, places where knowledge is shared, ways in which this is being done, and the people who are involved in these processes are identified. Finally, the contents of the information that is being shared are analyzed. Because both the topics and the categorization (inside or outside knowledge) are being discussed, this says something about the knowledge eagerness of local people and to what extent it can be stimulated with outside interventions.

There are a number of ways in which farmers share and disseminate knowledge between each other. Most farmers visit each others` farms, especially those of neighbors and family members. During our interviews with farmers, we have experienced this multiple times. For example, when we were interviewing Mr. Shafrudin, Mr. Anto dropped by to talk about how good the new seeds were working for them. This means that most knowledge is being shared within a smaller inner circle of neighbors who are usually family members at the same time. This means inside knowledge is being shared mostly between smaller groups of people and less outside knowledge gathering takes place. This does not necessarily say that people are not eager to gather outside knowledge, it is just less available.

The process of deciding which new crops to plant works through one way. When people tell them that a crop will be a great natural and commercial success, they will be very suspicious of this new information. This has to do with experiences in the past. People have been disappointed and traumatized many times before. The consequence is that people need to see that it works in order to believe it. They rely on their decisions on role models. Once they see that a certain crop has become a success with their neighbor, they will start planting it themselves. Nothing else can convince them. This means that a role model is essential to their actions, innovative entrepreneurship is not the current culture.

These findings reinforce and add to the importance to role models in entrepreneurial activities in rural areas that was given in earlier literature (Vaillant and Lafuente 2007).

Another important source of inside knowledge sharing, are people called “Tokoh Masyarakat”. Literally this means: community leaders and they are usually people who are a bit older and have a lot of farming experience. Although they do not have any official liaison with institutions like Adat, the mosque or the government, they give encouragement and advice to people without directly expecting something back. Because of their independence and knowledge, these are some of the most respected members of the society.

Also, local people come together in public places, like the traditional market on Friday when they don't work on the farm and go here instead. Friday is also the day of prayer and food is bought, people cut their hair at the barber shop, women buy food for the whole week, farmers buy new farmer tools and pesticides in the pesticide shop. At all of these places, information sharing takes place about how their crops are growing, how the weather is treating their crops. Especially the pesticide shop is a key place for knowledge sharing, since this currently is the only place where they can get access to knowledge from outside the community. Farmers go here at least 1-2 times per week to share each others stories and gather outside information about viruses and how to counter them. One of the problems with the outside information is that it comes from a company (Syngenta) that has an interest in selling the farmers pesticides, so local farmers feel that the commercial interest is too large. The biggest problem however, is that amount of outside information and the fit between information and information needs is relatively small and often too late (Small farmer Mr. Shafrudin).

Next to neighbors, family, Tokoh Masyarakat, and the pesticide shop, some farmers also share inside information with each other during meetings with a farmers' community (GAPOKTAN). Farmers in Selam Paung, who are members of the community, meet each other regularly in the house of the head of the community. They first gather in a monthly meeting to make collaborative decisions on which crops to start growing. This is

also a small inner circle where only the members of the community can make use of this inside knowledge sharing. Problems here, are thus that only members of the regionally located farmers' community can take part in this sharing of knowledge and that it is only inside knowledge sharing and they do not mix with other farmers from Lempur due to a lack of trust. This trust is lacking because they have provided fake copied, cheap seeds to the farmers. Farmer communities are only there because they receive money from the government agriculture agency. They are too directly connected to the government, so nobody really trusts them (PPL) (Dayan, Nopalion, FGD). while people have a large need for outside knowledge to counter viruses and solve problems, this is not the solution for them (Shafrudin, Roki, Anto, Nopalion, Tasyar FGD).

Most knowledge in Kerinci is shared within inner circles like with close friends in the pesticide shop, family members, neighbors, Tokoh Masyarakat and in some cases (Selam Paung) farmer communities. Although these circles do not intermingle a lot, a decent amount of inside knowledge is being shared already in relatively small circles. The process through which farmers decide which crops to grow is almost purely based on role models in the area. Outside knowledge is hardly reaching the area, although people state that they do need those types of knowledge, it is usually unavailable. The outside information that does reach them does not always fit their specific needs or comes out of commercial interest, which makes it harder to trust the small amount of outside knowledge that is currently available.

Q1.3 Which types of outside knowledge are local farmers most interested in at the moment, how (potentially) eager are they to gather this new outside knowledge?

The previous question already showed that most knowledge is shared in inner circles. By targeting the specific types of knowledge that local farmers are most interested in, this question aims to make an analysis of the potential outside knowledge eagerness and how it may be stimulated in the best way, based on the motivations of people to gather new outside knowledge and their openness towards new outside knowledge.

Most people in Lempur appear to be very open to new things, like new technology, especially the younger generation. (Mr. Daswarsan). This indicates a high level of potential knowledge eagerness. People would be more interested in knowledge that comes from outside the villages than in sharing inside knowledge with each other in a new place since this already happens in many places, since most inside knowledge is already being shared (Mr. Santani). In the many interviews and focus group discussions, a lot of different needs were mentioned by the farmers, however there are two types that were mentioned by everybody, those are: (1)Marketing (place to sell) and supply chain transparency: all demand and profit related activities. (2) Viruses: how to counter them in the best way in order to have a successful harvest.

(Mr. Shafrudin): Information he really needs is about which pesticides to use for his chilies, given the many diseases and viruses. Viruses are the most difficult times. They (he and his family and friends) have asked the farming (government) centre in Sungai Penuh many times for advice in these situations, but they never get a response (Small farmer Mr. Anto). These efforts to obtain outside knowledge are a sign that inside knowledge sharing is falling short in answering important issues they have to handle on their farms. It may be because inside knowledge sharing is not stretching far enough and the circles in which it is being shared are too small. It may also be that the inside knowledge just does not provide enough to counter the problems the farmers experience. In both cases, the questions asked by small farmers are an example of (potential) knowledge eagerness.

Another example of potential knowledge eagerness occurred in 2010. Almost the complete harvest failed. Farmers could only tell whether there is a crop disease about 1,5 to 2 months after seeding. This should be sooner, they feel. Pesticide sales people (Syngenta company) sometimes give information and presentations about pesticides to use, but they always have commercial motives, which makes it harder to trust them. They provide invitation letters and people gather in the elementary school to attend this. Besides giving information and education about when to plant what and what pesticide to use, they are also there to sell their products. At the first gathering, about one month ago,

about 100 people attended in the elementary school. Besides this, every time a virus hits, they don't know where to go for information or advice about e.g. pesticides. This is a large problem for them (2-year stop of chili growing). Farmers have an overall sense of confusion and many times they don't know what to do in this uncertain situation.

The third example comes from the focus group discussions. Many farmers have an overall feeling of being neglected by everybody: the government, the farmer communities and the big farmers. There is hardly any control or monitoring by the government in the farming areas. Many farmers are not a member of the farmer communities since they have very close ties to the government, which is not trusted. Also farmer communities do not distribute the necessary information or seeds. Big collectors of cinnamon are not trusted, since smaller farmers feel that they do not get a fair price for their crops and are being exploited in favor of the profits of big collectors. They lack the transparency that the small farmers desperately need.

Farmers in the Kerinci district are predominantly interested in two broad categories of outside knowledge. They want more information on how to counter viruses and how to raise their profits and related demand issues. There are signs that indicate a large potential for knowledge eagerness, however the resources to obtain these types of knowledge, i.e. questions for the local agricultural government department, large groups of people at information meetings of pesticide shops and an overall feeling of neglect by other stakeholders. This indicates that the potential for outside knowledge eagerness is not fully stimulated by other stakeholders at the moment.

Q1.4. What are currently the barriers to empowerment by means of new knowledge creation by local farmers?

The first barrier is a lack of capital for investing in new crops. Mr Dayan usually usually talks to farmers about empty pieces of land. He encourages them to plant crops. In total there are about 2,000 hectares of empty land in total. The empty land predominantly had a cinnamon destination in the past, but now nothing is growing there anymore. The main

reason is that there is not enough money to replant. They need money for workers, seeds, etc. and they don't have that in many cases. In 2000, if people wanted to plant in 2.5 hectares, they just needed about 3 million IDR, but today this amount has risen to about 12 million IDR. (Mr. Dayan)

The second barrier that exists at the moment for farmers to effectively create new knowledge is (a lack of) infrastructure. However reachable by truck, the roads are in bad condition to Sungai Penuh and also to Jambi or Padang. To travel between Lempur and Sungai Penuh is almost one hour. From Lempur to Padang is a journey that can take more than nine hours. This makes it harder for farmers to sell their crops to other people than the ones that take the journey to their area or the bigger farmers that are already in the area.

The third barrier is somewhat related to the second one and concerns the limited amount of outside information that farmers have. The farmers have experience an overall feeling of neglect by the government, farmer communities, NGOs and big farmers. The PPL does not reach the farmers because of the remoteness of the area), and when they ask help from the agriculture department in Sungai Penuh they get no response. Decreasing profits force farmers to sell pieces of their land, making the big farmers bigger and the small farmers smaller. (Mr. Nopalion) Also they are cut off from outside information, since the nearest Internet Café (Warung Internet or WarNet) is at least 40 minutes away (Mr. Yayik).

The fourth barrier has a more cultural significance. People are afraid to change their crops or way of farming, because they are afraid of failures, they need a role model that succeeds first before they will change these things. An example are chilies. Nobody ever had the guts to plant them, until a Javanese business man came to the area and tried to plant them three separate times. Only after the third attempt, he succeeded and only this time it caused a major wave of people all around the sub-district of people copying this and planting chilies in big numbers. Related to this are the many disappointments or trauma's that people in the area have had to face in the past. This may be the cause of the

current reluctance to create new knowledge and opportunities for making a better living. (former Adat chief).

Summarizing the previous section, there are four main barriers to empowerment through knowledge sharing and new outside knowledge creation for local farmers. The first barrier is simply a lack of funds. The second barrier is a lack of good infrastructure in the surrounding area which also partly creates the third barrier: a lack of availability of outside knowledge, which is needed to fill current knowledge gaps. The fourth barrier is formed by past trauma's and disappointments which have raised a considerable amount of suspicion towards both internal and external stakeholders.

Q2: *“What should the most effective Knowledge Sharing initiative look like given the constraints of the case study with respect to the right balance between inside and outside knowledge continuum and the context for local improvisation to stimulate knowledge eagerness with the local farmers community of Kerinci, Sumatra?”*

Q2.1. *Which alternatives are available to boost local farmers' knowledge eagerness and how effective will they be?*

Based on the information needs, motivations and barriers to obtain new knowledge that were identified in Question 1, this sub question aims to identify three different forms of knowledge eagerness creation that are available to stimulate local people to gather new outside knowledge.

Van Kammen (2010) already gave an option of how to make people who currently just share inside knowledge more willing to become open to new outside knowledge: she came up with the idea of transporting local people from isolated areas to more developed areas like Bandung to make them more aware of the changes that are possible and let them follow knowledge eagerness trainings. This sort of initiative has not been researched in the current study, however on face validity, this solution does not seem valid in areas where the population is predominantly from local origin like with Lempur where 90% of the population are from the local area. They have lived there their whole life and see little reason to move or leave their area (Daswarsan). In areas where the

population is less stable, this might be an option, and this could be an interesting possibility for future research.

Next to actually building a Café, if people need to be made eager to create new knowledge, already existing locations such as the Adat building or one of the elementary schools could also be used. The Adat building since it is only used once per year for the annual Adat meeting. The elementary schools can naturally only be used after school ends or in weekends or holidays. However, the Adat i.e. school needs to be in accordance with this and it is not certain that the location of the Adat or school buildings is optimal for local farmers to have the highest impact. Also the neutrality may become a danger, people may feel that there is a commercial goal instead of knowledge creation, since pesticide shops have used school buildings before in the area (Mr. Shafrudin).

Next to providing seeds, the government of Indonesia also provides help to farmers in the form of information through their PPL program. However, from the interviews and focus groups we held, it appeared that help from the government reaches only a small portion of the total number of people. And when it does reach the farmers, they are usually the bigger farmers, since they are easier to reach. They are assumed to distribute the information and resources to other farmers in a fair way, but this did not appear to be common practice. When people go to the local government agriculture help offices in the region they do not get answers to their questions at the moment.

Summarizing the different options from theory and practice, it does not seem feasible to transport local people to more developed areas; this could be topic of interesting new research though. Using existing buildings from schools or tribes is also not likely to be an effective option because of location, permission, and neutrality issues. As a last point the government has not been active in stimulating local people to obtain new knowledge: on the contrary, when farmers come to them for help they don't respond.

Q2.2. Which characteristics should the knowledge sharing intervention contain in practice in order to match farmers' knowledge needs?

During the interviewing stage of this research project, many different possible characteristics that a knowledge sharing intervention could comprise have passed the review. However for one individual farmer, depending on his personal circumstances, one element may be more important than for the other farmer. This is why it was decided to conduct focus group discussions with a group of farmers that is heterogeneous in terms of age, size of their land and geographical origin (Appendix E). The advantage of focus group discussions is that people will have to come to a consensus and this yields prioritized data of which features are most important when a new knowledge sharing initiative will be implemented.

The first element that was mentioned was information about marketing. Farmers experience difficulties with selling their crops. When crops succeed, they usually succeed in big numbers, so it is hard to find buyers who want to pay a fair price for their crops. Supply is higher than demand in these cases.

The second element that they mention are money models or schemes, they would like to obtain micro credit. Related to this is information about markets, market prices, demand for their goods and transparency of the supply chain.

The third concerns the other serious occasion: information about diseases and viruses. When crops fail, this means a disaster for people: they have no income at all. However, usually it takes at least 1,5 until 2 months before farmers can tell whether their crops have a virus and it will be too late to use pesticides at that time.

Q2.3. How effectively can a Knowledge Sharing Café influence local farmers' awareness and knowledge eagerness?

In this final sub question, the initial model from Figure 4.5 about perceived generators of knowledge eagerness and the role that a new knowledge sharing initiative can play in this

process was applied to the case study of the Tripper Knowledge Sharing Café in Kerinci. When comparing the results of the field study with the initial model (Figure 4.5), the following remarks can be made.

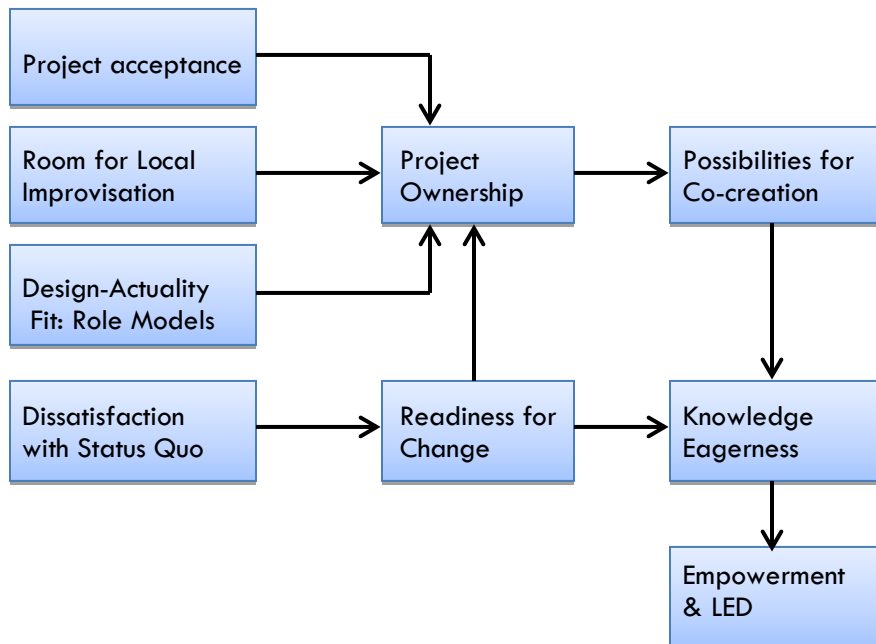
Local farmers potentially have a high level of knowledge eagerness. They are open to new things and have a large need for outside knowledge about markets, market prices, demand figures and crop viruses and diseases that is not available to them at the moment. Especially market prices are readily available from Tripper's company information and internal websites. Also demand figures for crops can be gained from market intelligence websites like www.euromonitor.com. Information about viruses could also be gained via the Internet, but also when agricultural experts stay overnight in the Café. When it comes to positive attitudes fit between information contents and needs, the Café seems to be an attractive solution. When we look at the model, positive attitudes and fit between outside information needs are taken together in a new concept: project acceptance

At the same time, local farmers are suspicious of outside initiatives like the Café, because of bad past experiences. This means that new initiatives in the area will have to take into account the ways of current knowledge sharing extensively in order to make a knowledge sharing initiative into a success story. This means that Room for Local Improvisation stays important just like in the original model. Also design-actuality-fit, in the case study, means that current ways of knowledge sharing through role models, Tokoh Masyarakat, family and neighbors must stay very important when a Café is being implemented. For the Café, this means that information on how to use effective intercropping, how to grow new crops and how to counter viruses must make extensive use of the land around the Café in order to fit within the tradition of role models. Information from the Internet must be conveyed by a TM or through inner circles of people who drink water and coffee around the Café or at other places in order to be communicated effectively.

During the interviews and focus group discussions, another important element also arose that was supported by precious literature on change management (Cummings and Worley, 2007): dissatisfaction with the status quo. Before readiness for change can be

achieved, people need to be dissatisfied with their current situation. Local farmers in Kerinci experience an overall feeling of being neglected by all important stakeholders and thus are very dissatisfied with the status quo. This significantly enhances the chances of success of the Tripper Knowledge Sharing Café even more and the “dissatisfaction with status quo” construct was added to the new conceptual model for implementing Knowledge Sharing Initiatives. The resulting new knowledge sharing project implementation model can be seen in Figure 5.3 below.

Figure 5.3. Generating Knowledge Eagerness through the Implementation of a Knowledge Sharing Project



CHAPTER 6

CONCLUSIONS

6.1 Company Recommendation

When it concerns the information needs of farmers, it becomes very clear that the farmers have great needs for outside knowledge and expect empowerment help from outside their community. However, they experience a feeling of neglect since nobody really helps them with the information that they need. The only persons that sometimes help the people, are people that are called Tokoh Masyarakat. These are people that come from

the area and are both trusted by the local people and experienced, but they are scarce and cannot always divide their attention to all the different farmers that need help from them. The literal translation of Tokoh Masyarakat is community leaders, however they have no ties with any form of organization in order to remain independent. Sometimes they give speeches at the mosque. Because the cruciality of a Tokoh Masyarakat only showed near the end of my research during the focus group discussion, I was yet unable to find an example of a person who can be considered as a TM. Its importance can however not be understated.

Since the trust in other stakeholders like big farmers, farmer communities and the government is considered low, a Knowledge Sharing Café provided by a company like Tripper would make a better chance at influencing people's awareness, readiness to change and knowledge eagerness than initiatives that come from those stakeholders. This is with the condition that room is left for local improvisation (Figure 9) to be able to overcome initial suspicion of local people since they have been disappointed before too many times to start trusting a new one right from the start. Patience is, like with many things in Indonesia, essential.

When combining the findings of the field study with the findings from previous literature, a new conceptual framework (Figure 9 on the previous page) is shaping up. It comprises the same elements as the model that was built after the first part of the literature review was carried out, however in a somewhat different order, also some concepts have been added to the picture. First, the field study findings have produced more clarity on the basic conditions that need to be in place before a change can be made in knowledge eagerness, like dissatisfaction with the things the way they are at the moment or "status quo".

The questions and information needs that farmers in remote rural areas have need to be answered in order to achieve more knowledge eagerness and local economic development. However the current contents of inside knowledge fall short and most outside knowledge initiatives are not trusted. This is why a new knowledge initiative

needs to fit into the traditions and culture of inside knowledge sharing (role models and sharing through Tokoh Masyarakat) while at the same time providing valuable knowledge from outside the community.

6.2 Conclusions on a Higher Aggregation Level

The main research question was: *“Which kind of knowledge sharing may help rural communities in Kerinci, Central Sumatra in the best way in order to achieve knowledge eagerness and effective empowerment and why might this be the most effective way?”*

The processes through which knowledge sharing works: inside and outside knowledge sharing are depicted in the new conceptual model. The combination between the lack of outside information and the currently available, insufficient, inside information had not been researched before. The new conceptual model shows that making a combination between current ways of inside knowledge sharing and the contents of outside knowledge sharing is crucial for generating potential knowledge eagerness into achieved knowledge eagerness.

Rural areas where inside knowledge sharing does not provide the necessary answers to achieve local economic development need to be dissatisfied with the status quo. Also, they need to successfully overcome their initial reactions of suspicion and resistance to change. When these steps are carried out successfully, the area has a significantly higher chance of co-creating new valuable knowledge. The social function of the knowledge sharing café has more a function of overcoming resistance to change than purely co-creating new knowledge.

Much of inside knowledge is already shared inside the community. The added value of a Knowledge Sharing Initiative mostly lies with the function of being a role model for raising entrepreneurial spirits of the farmers by showing them how to grow different crops. This works through the following process: outside knowledge (new crops) is combined with ways of inside knowledge sharing that fit within the cultural and social

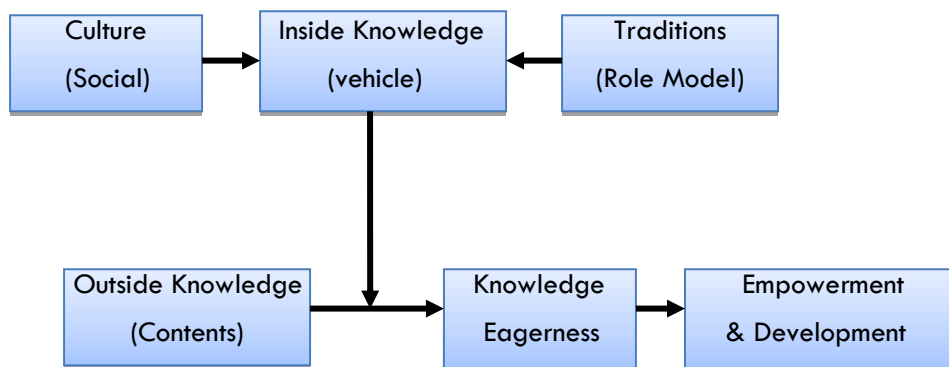
habits of local people (use of pieces of land that act as a role model) in order to stimulate entrepreneurship of local farmers.

6.3 Discussion

Providing outside information on market prices answers to virus and disease related questions needs to be shared by inner circles of people in order to be properly absorbed. The empirical findings have provided support for a number of additions to the original conceptual model. The significance of role models for entrepreneurial behavior is being reinforced by the current study and it is added as a way in which inside knowledge sharing takes place. People need to see that it works before they can internalize and trust new outside knowledge.

The essential outcome of this research project states that local farmers' knowledge eagerness can be stimulated in the most effective way by combining the *contents* of outside knowledge with the *vehicle* of inside knowledge. In other words: new knowledge comes available to people in ways that are common, trusted, and fit within their traditional cultural and social habits. This is graphically depicted in Figure 10 below. Instead of the continuum, inside knowledge sharing is thus used as a vehicle, giving shape to the process of outside knowledge eagerness.

Figure 6.1. Knowledge eagerness on a higher aggregation level



This section discusses the findings of this research project and links them to previous academic articles about change management and the role of entrepreneurial role models in local economic development.

The point is that in the Lempur, Kerinci area, a great absence is felt of public private partnerships and thus leadership. No initiatives are undertaken to enhance the ability of the region to cope with market conditions, while natural resources are actually quite vast. The soil does not need any treatment for cinnamon trees, the height and landscape are perfect for farmers and the climate is favorable. On top of that, demand for cinnamon and chilies is considerably high. In short: Resource endowments and their fit with market conditions are just fine, however entrepreneurship (institutions + leadership) (Stimson, Stough and Salazar 2005) falls short.

When we look at proven implementations of change within organizations, Cummings & Worley's (2009) influential work on organizational development and change provides a useful set of steps that need to be followed in order to achieve organizational change successfully. The first step concerns motivating change and comprises two main methods: increasing readiness to change and overcoming resistance to change. The first element of their theory resides in the statement that people's readiness to change needs to be increased by creating a feeling of dissatisfaction with the *status quo*.

During the focus group discussions it turned out that this step has already been taken care of for a large part: local people, especially small farmers are already quite dissatisfied with their situation, however they lack the power, money, resources and courage to do anything about it. They are too afraid of big collectors and landowners, crop failures, and have been traumatized by earlier experiences.

The second element of step one is about overcoming resistance to change, whether it be technical, political or cultural resistance. Technical resistance means that people have too much gotten used to their own techniques, making them change resistant. Political resistance is concerned with powerful actors trying to protect what they have, hence

obstructing change. Cultural resistance is related to procedures and standards of practice. All three types of resistance to change can be significantly reduced by applying ways of inside information sharing that are common to local people: role models, drinking coffee and coming together to discuss their crops.

Earlier researchers (e.g. Vaillant and Lafuente (2007) and Kammen (2010)) already provided indications about the importance of entrepreneurial role models in rural economic development. The empirical findings of this research project support these findings and reinforce the importance of the entrepreneurship in rural economic development as was proposed by Stimson (2005). It is identified as one of the key elements that a new knowledge sharing initiative should consist of. On a larger aggregation level we say that a role model is a way of inside knowledge sharing that is common to local people and is essential for creating local economic development. By increasing the possibilities for knowledge creation in an area, the mobilization and development of scientific research capabilities can achieve a synergy. This synergy can play a significant role in eliminating resistance to change and generating knowledge eagerness in rural development.

The results provide support for the neo-endogenous theory of rural development. Just inside knowledge sharing and endogenous factors have proven to be lacking. This is why the Stimson et al.'s (2005) model was not complete. The new overarching model should also include and value the contents of outside knowledge in local economic development. This is depicted in Figure 11 below in the form of Institutions and Entrepreneurship that come from outside a rural community and bring outside knowledge sharing.

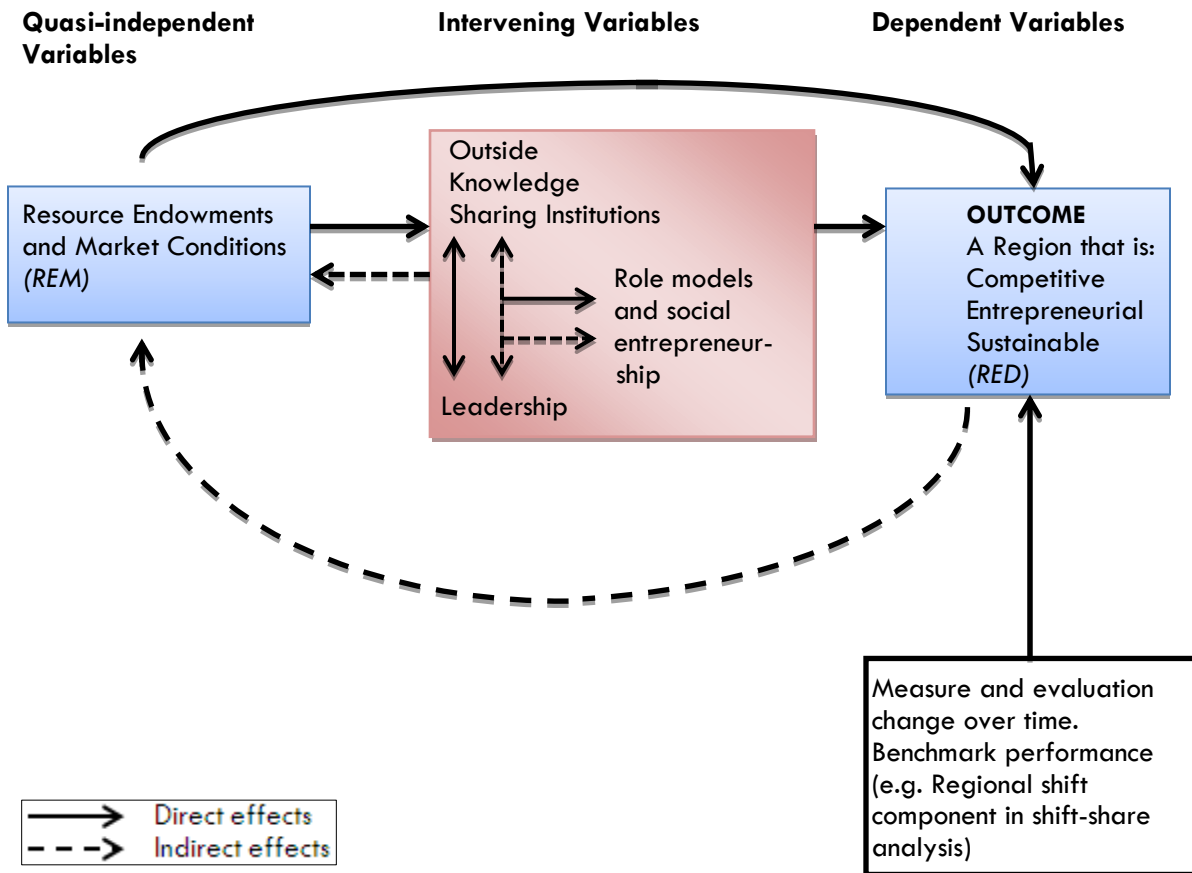


Figure 6.2. Neo-Endogenous factors added to Stimson et al. (2005) model

LIMITATIONS AND REFLECTION

It does not need much explanation that evaluating the effectiveness of an initiative before it is being implemented is an uncertain event. The tools a researcher then has are not based on evidence regarding the actual implementation. He should work with the data that are available in the area of study (secondary sources, observations, interviews and focus groups) and at the same time data based on implementations of comparable initiatives that have been implemented in the past in other areas. He needs to review proven methods of implementation and learn from mistakes made in the past. The design actuality paradigm Heeks (2002) has thus received less attention than it should have had in my empirical results. Also, during my research I was supported by Tripper in many ways. Their initial idea of a knowledge sharing café has thus gotten much attention during the field study phase. My initial idea behind this research project was to only add to the academic literature what a knowledge sharing café can contribute, later it was changed to a more general phrase: which kind of knowledge sharing helps rural communities in the most effective way? The initial focus on the knowledge sharing café may have narrowed my scope a bit too much. During my field study, I have aimed at asking questions about current ways of knowledge sharing to all farmers without mentioning anything about a Café to try to avoid this pitfall. However, it can still be the case that my initial focus has influenced my objectivity and during the process of writing and rewriting I have tried to take this into account. Another element that deserves attention is the social acceptability of answers to interview questions. I have tried to solve this issue simply by asking open questions and asking extra check questions to both ways of an issue. It is however never 100% sure, especially in the Indonesian culture, that people are not just stating answers that they think you would like to hear.

Money was needed when booking the flight from Holland to Indonesia, hiring a translator/ guide. Since the budget is capped at student loan level, a limited budget is available, but enough to get around since domestic travels are compensated by Tripper. Tripper also was kind enough to provide accommodation in Indonesia, which also saves considerable amounts of money. Because of the time constraints, see time plan above,

data will be gathered in a period of approximately three weeks (8-28 September).

FUTURE RESEARCH

Future research could e.g. focus on the actual post-implementation phase of a Knowledge Sharing Initiative like the Tripper Café could be evaluated by making use of the conceptual model that was created in the current study. However, the model is not just confined to the Tripper Café and can be applied to any intervention that is being applied in rural areas with the aim of creating empowerment and local economic development through means of knowledge sharing.

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APPENDIX A.**LIST OF INTERVIEWEES**

Name	Function	Organization	Date
Mr. Dayan	Staff member of big cinnamon collector	Santani	12-09-2011
Mr. Ismi and Mr. Em	Small cinnamon farmer	N/A	15-09-2011
Mr. Marno	Small farmer	N/A	15-09-2011
Mr. Salam	Small farmer	N/A	15-09-2011
Mr. Mudi	Small farmer	N/A	22-09-2011
Mr. Andre Gibson	Public Relations Officer	TNKS Kerinci Seblat National Park	14-09-2011
Mr. Shafrudin and Mr. Roki	Small farmer	N/A	15-09-2011
Mr. Suhardiman	Former Chief	Adat (Tribe)	14-09-2011
Mrs. Hadja Mariana	Big farmer	N/A	13-09-2011
Yunes Rusel	Cinnamon farmer and Kepala Desa (Head of the Village)	Head of Desa Lempur Mudik	13-09-2011
Mr. Anto	Small farmer	N/A	15-09-2011
Mr. Andi	Cinnamon farmer and leader of the Lempur youth movement	Lempur Youth Organization	13-09-2011
Mr. Daswarsan	Former Puskesmas, Vice President of Health Organization	Health Organizaion Sungai Penuh	14-09-2011
Mr. Rusnadi	Small farmer	N/A	10-09-2011
Mr. Santani	Supplier to Tripper; Big Collector	Santani	10-09-2011

Mr. Irwan	President	GAPOKTAN Farmer Community	13-09-2011
Mr. Jabarudin	Field Agricultural Officer	PPL Government Agricultural Help	17-09-2011
Mr. Nursal	Kepala Kelurahan/Desa (Head of the Village)	Lempur Tengah	13-09-2011
Prof. Ahmed Rafea	Initiator of REDCON Project, Rural Internet Support Egypt	Director of the Central Laboratory For Agricultural Expert Systems	19-10-2011
Mr. Surtuni	Kepala Desa (Head of the Village)	Koto Tengah (Kayu Aro)	25-09-2011
Mr. Yayik	Geographical and Cinnamon Expert	Tripper Inc.	11-09-2011
Mr. Francois Bernard	CEO	Tripper Inc.	2-09-2011
Prof. Richard Heeks²	Professor of Development Informatics, Director of Centre for Development Informatics	Institute for Development Policy and Management, University of Manchester	29-10-2011

Table A1. List of Interviewees

² Interview by E-Mail

APPENDIX B.

INTERVIEW QUESTIONS (Cinnamon Farmers/ small collectors)

INTRODUCTION

Q1.1: (Basic Needs, Human Capital Perspective & Local Institutional Perspective)

What can you tell me about yourself in terms of:

- Who you are?
- Your age?
- Your family, friends? (*LI-Perspective*)
- Where you come from? (*LI-Perspective*)
- Whether you went to school? (*HC-Perspective*)
- Can you read or count? (*HC-Perspective*)
- Are you familiar with using computers or the Internet? (*HC-Perspective*)
- Do you have any medical conditions or other problem you would like to talk about? (*BN-Perspective*)

FARMER CROP QUESTIONS:

Q1.1: (Human Capital Perspective)

- What is your profession? What crops do you grow? (*Q1.1: HC-Perspective*)
- Why did you choose these crops? Please explain per crop? Where did you obtain this information about this crop? (*Q1.2: how and where is knowledge gathered*)
- What problems do you encounter with these crops? (*Q1.3: which types of KL are farmers interested in; Q2.3: which Café-features are needed*)
- What information are you most interested in when it concerns your crops? e.g. prices, weather, yield time, how long it takes to harvest, how to best spread risks, etc? (*Q1.4: What motivates farmers to gather new knowledge?*)

- Where and from whom do you usually obtain these kinds of information? (*Q1.2: how is knowledge gathered?; Q1.2: where and how is knowledge gathered*)

- What information do you get from people living close to you in your village? (*Q1.2: where and how is knowledge gathered?*)

- What information do you get from outside your village? e.g. from visits you made yourself, telephone calls, letters, papers, internet, visitors to your area, etc.? Please explain. (*Q1.2: how and where is KL gathered; Q1.5: Barriers for creating new knowledge, e.g. infrastructural*)

- What are the difficulties of obtaining knowledge from outside about e.g. prices, weather, or whatever information you are interested in? (*Q1.5: Barriers for creating new KL*)

- What information would you like to obtain before you would choose to harvest new crops? (*Q1.4: what motivates to gather new KL*)

- What kind of support would you prefer in order to remain producing cinnamon? e.g. Chilli seeds for inter-cropping, location to drink free coffee and water and meet other farmers, long-term contracts, religious support, medical support? (*Q1.3: Which types of KL are they most interested in*)

- What crops did you grow in the past and stopped? e.g. traditional, non-organic cinnamon? Why did you stop growing them? (*Q1.4 What motivates them?*)

- How did you manage this change? (e.g. start organic cinnamon) Did you have help from inside or outside sources of information in making sure this would succeed? (*Q1.2 How and where KL is gathered*)

- If the same situation happened as with the previous change, would you use the same approach? (*Q1.2 How and where is KL gathered*)

- What information is most important to you when choosing new crops? (*Q1.3 Which types of KL are they most interested in*)

- What information would you need before you changed to a new crop in the past and in the future? Has the amount or type of information you need before change is possible developed through time? (*Q1.2 How and where is KL gathered, Q1.3: which types of information are they most interested in*)

SPECIFIC CAFE QUESTIONS: (*Q2.1 possible characteristics?, Q2.2 which match with farmers needs?, Q2.3: which features, Q2.4: feasibility?*)

- Do you ever go to a Warung Kopi (Coffee Store)? (*Q2.5: feasibility*)

- How many hours per week do you spend there? Do you usually go alone or with someone? (*Q2.5: feasibility*)

- How often do you drink coffee with other farmers? Would you appreciate it if Tripper gave you this opportunity? (*Q1.2 How do local people gather KL?, Q2.3: which features does the café need?*)

- What would you like to see in a Cafe? (*Q2.3: features of the Café?*)

opportunity to talk to other farmers

learn about local knowledge for cinnamon

learn about local knowledge for other crops

water, coffee facilities

opportunity to pray

information about the weather

information about prices

receive seeds for inter-cropping
access to medical help
other?

- If Tripper were to place a Cafe here, would you use it? How much? Once a month, once a week, multiple times per week? (*Q2.5: feasibility*)
- If you had more information about future prices of crops and received it via a Cafe; would it change your view of crops? (*Q2.4: Role of Café raising awareness and knowledge eagerness*)
- Would the availability of a Cafe change your view on which crops to grow? How? (*Q2.4 Role of Café in raising awareness and knowledge eagerness*)

ADDITIONAL QUESTIONS FOR ANSWERING THE MRQ

- Where do you obtain knowledge about health benefits of cinnamon and other crops? (*MRQ*)
 - Where do you obtain knowledge about crop diseases? How do you handle this? (*MRQ*)
 - How and from whom do you learn about agricultural techniques? (*MRQ*)
 - Where did you get the idea to start producing a) a particular crop b) in a particular manner, c) change the way you treat diseases, d) change the way you irrigate your land, e) change the seeds or seeding process, f) change your soil composition or treatment, g) in different times of the year, h) different weather conditions (Use which is applicable) (*MRQ*)

APPENDIX C

THE CINNAMON SUPPLY CHAIN

According to the data of 2007, Cinnamon were planted by 17% of the people of Kerinci or by 13250 families. About 20% of that amount are “small farmers” (“petani kecil”) with an acreage of less than two hectares and the rest of the Cinnamon plantation area (80%) belonged to “land owners” (“pemilik lahan non petani”). The amount of hectares of plantations reaches from smaller than 1 hectare until more than 300 hectares. The average piece of land is around 25 hectares.

There is a difference in land utilization between small farmers and land owners. After cutting down the trees, small farmers utilize the lands by planting horticultural products such as potatoes, hot peppers, etc. Land owners usually let the land be after cutting down the trees. Most of the trade of the cinnamon trees takes place right on the plantation areas in a wholesale system. Buyers, also called “Wholesale Farmers”, will estimate the price of a piece of land with cinnamon trees on it and will do an offer for the value of the trees on the piece of land. This person is well-known as Wholesale Farmers or 'Petani Borongan'.

Viewed from the roles, Wholesale farmers cannot be classified as farmers, because they do not commit any cultivation activities, however they do play an important role in the common cinnamon supply chain. After purchasing the trees from the farmers or land owners, wholesale farmers will place daily worker on the site. These workers will do the tree cutting tree skin peeling, drying and take care of the transportation to four-wheeled-vehicles reachable places. The system of payment to the daily workers is based on the amount of Cinnamon skin handled by each person. Workers thus get paid per kg rather than per hour.

Cinnamon used to be (and to a lesser extent still is) like a deposit on the bank. Whenever people need money for one of three reasons: a) health, b) education, c) marriage of their

children, they decide to go to a Wholesale Farmer (supplier to Tripper) and let their trees be cut.

The value of the tree grows increases at an exponential rate, once it has lived for about 7 years:

7 Years < 10 kg

10 Years < 20 kg

12 Years > 25 kg

The first seven years there is almost no revenue at all. This means waiting pays off and people will only cut their trees when they need money for those three reasons

Cinnamon replanting only takes place automatically from old sprout, there are no new seeds for replanting cinnamon. Like the case with Mr. Roki and Shafrudin, just outside Lempur Tengah: *“Replanting of cinnamon on my land took place automatically from the sprout of existing trees that were chopped in 2006. I don’t replant cinnamon myself, since chillies are a lot faster way to get money. From seed to first harvest is about 4 months, after this I will gain about 4 extra months of extra harvesting and benefits. This means I will have income for at least 8 months per year of these chillies, while cinnamon does not give me any income the first 7 years at least”* (Mr Roki, son of Shafrudin)

Replanting cinnamon

The biggest problem with replanting cinnamon is the low price. Paying off the workers of cinnamon now already makes up half of the price they get per kg. This, together with long harvest times, make it very unattractive to replant. When asking how high the price should be, he doesn’t want to mention a price. His father (Shafrudin) shouts and laughs that it should be around 30,000 per kg.

Intercropping cinnamon

In the beginning, cinnamon seeds and chili seeds go together fairly well. After 2 years, however, it already becomes a problem to plant anything else but cinnamon in a cinnamon field. After about 5 years it becomes impossible, mainly due to reduced sunlight. Once the cinnamon price is high, people will cut the old cinnamon in field A

and start growing other crops in this field, while planting (if the price is high enough) in field B. This is an ongoing circle of land use change.

The wood on the inside of the trees still profits the people: for 10,000 kg (about 4 big trees) they can still get about 600,000 IDR. It is mainly used for houses, cooking fire for weddings, etc.

Channels for farmers to sell their goods

Channels for farmers to sell their products are thus different for different products. Selling e.g. chilies is usually not a big problem: there is a lot of local demand, people even visit their farms to buy their chilies, while for cinnamon the main use is export. Cinnamon is never used by local people or local industries. Most cinnamon farmers in the area sell to big cinnamon collectors like mr Santani. These big collectors have the right links with trading companies like Tripper. However, some farmers also supply to the other cinnamon buyers in the area e.g. on the market in Sungai Penuh. These people sell their goods again to traders from Padang and are named intermediaries or “Tokes”. Farmers thus trade their cinnamon through two main channels which are close to their farm. Outside knowledge about market prices or demand figures from across the seas is not available to them.

Special thanks to Mr. Yayik, geographical and cinnamon expert at Tripper of the Kerinci area.

APPENDIX D

OBSERVATION REPORTS 5 VILLAGES OF LEMPUR, SELAM PAUNG & KAYU ARO

Background

Lempur always used to be one of the wealthiest and most developed areas inside Kerenci. Although education levels are still relatively high, due to low cinnamon prices, the average wealth has decreased considerably. Town planning and organisation are still at a reasonable level though, since these will not change quickly. (Mr. Dayan)

Basic Needs Perspective

Health organization in Indonesia

The government has two major programs for its decentralized Puskesmas system: 1) Jamkesmas, 2) Jampersal. Jamkesmas (Jaminan Kesehatan (Health), Masyarakat 2005) is a program especially for poor people in remote rural areas that find it hard to pay for and access healthcare. Healthcare is free for these people, however they have a lower priority and their treatment differs from people who have health insurance. Jamkesmas can only be accessed by people who are in their own village. Jampersal (Jaminan (insurance) Persalinan (=birth process) Masyarakat (people)) is a new program since 2011 also a free service, for mothers giving birth: maternal help. This can be accessed by all Indonesian people everywhere in the country. Insurance for public servants, government officials, and teachers have a special case of ASKES health insurance. This is not free, 50% is compensated by the government, however priority and treatment are at the highest level here. The people who can afford it and do not work for the government have private insurance. Some private workers also get Jamsostek (Jaminan Sosial Tenaga Kerja (worker) = social insurance for employees of private companies). One Puskesmas usually serves about 10 villages, this means every sub district usually has one PKM. Besides this, every village has its own nurse (Bidan Desa) for first aid. If the nurse can not help you, you go to a PKM. If the PKM can not help you, you go to Sungai Penuh to the main, general hospital (Rumah Sakit Umum) (name: mayjen A. Thalib). If they cannot help you

here you go to one of the province capitals: Jambi (jambi) or Padang(west sumatra) (Mr. Daswarsan).

Healthcare

Lempur

Common problems in the area are: asma, diabetis, and problems related to high amounts of cholestrol: hypertense, stroke, these are all genetic diseases. This is especially the case since people use a lot of coconut oil. There are 3 major peaks of these types of illness reports of people:

1. Just after the Lebarran Hadji (in October):
2. Idul Fitri (September)
3. The annual ADAT-meeting (9 October 2011) every year in a different village.



Figure D1. Village Sign Lempur Tengah



**Figure D2. Puskesmas (Health Center)
Lempur Tengah**

There is not really a sporting culture in the villages: football is done occasionally but not regularly. Despite all this, Lempur people care more about their health than in most other areas. In 2010, only 4 cases of malaria were reported in all of the 5 villages.

Life expectancy is about 65, people work until they are about 60 on the farms. Also the PKM Decentral Health Center (Figure 13) is quite modern and very close 50% of the people has the productive age of 25-50, 30% of the people are between 1-25, 20% of the people are 50+, people of 60 years old are still working hard on farms usually (Mr. Daswarsan).

The five villages of Lempur all have a relatively high access to healthcare. Every village has at least one nurse (bidan desa). And some villages like Manjuto even have certified doctors (see observation report Lempur). Lempur Tengah (Central Lempur) is the village where the Puskesmas centre for the five villages is located. Pusat Kesehatan Masyarakat literally means People`s Health Center and it is the place where an ambulance is located and where people can go to if the village nurse cannot help them. If the doctor of PKM is also unable to help, the sick person goes to the central hospital, which is located in the former district capital of Sungai Penuh. This is located at 40 minutes drive distance from Lempur (Mr. Daswarsan).

Selam Paung

The medical conditions that emerge are mainly flu and coughing, which are common in the mountains. Sub-Puskesmas is in place, with a village nurse (nurse desa). Selam Paung only has access to this village nurse. There are no doctors in or around this village and the bad infrastructure and small access roads make it very problematic for sick people to get help in this village. It also does not help that this village is located on the end of the road, which makes it an isolated area. If a person is really sick he or she will have to go to the PKM in Lempur Tengah (which takes about 40 minutes) and the doctor there will have more expertise on whether to send this person for another ride of 40 minutes to Sungai Penuh. (Mr. Irwan)

Kayu Aro

Kayu Aro has a brand new Puskesmas center with an integrated hospital, qualified doctors, ambulances. This center was funded and built by the European Union fund for development. Kayu Aro has two places where vaccines are given to predominantly babies (Posyandu), 7 educated health care professionals live in the village (Mr. Surtuni).

Water and Sanitation

Lempur

The Lempur villages all have the same water source, which comes directly from the mountains and provides relatively clean water which people use for drinking and washing (Figure 14).



Figure D3. Water Supply of 5 Villages of Lempur

Selam Paung

A village pump has been provided by the government and it provides the villagers of enough drinking and washing water. 50% of the villagers make use of the public sanitation, since they do not own their own private toilet.

Kayu Aro

Kayu Aro has its own water source like Lempur. It also has a factory that produces packaged drinking water. Overall access to drinking water is very good. All people have private sanitation (Mr. Surtuni).

Food and Living

Lempur

Lempur is surrounded by the national park on three sides. This makes the place more isolated than it already is. When the cinnamon price rises again, the effect will be not only on the farmers' lands, but also on the national park. This would mean that small

collectors will sneak into the park, which is colossal so impossible to check for park rangers, and chop cinnamon trees to earn the increased income. When prices will rise to peak levels again, it may even mean replanting of cinnamon trees inside the park. (Mr. Dayan)

Development in the area depends largely on cinnamon. When the cinnamon price is high, living conditions will also improve. The current stock of cinnamon is about 25 years old, the eldest is even 60 years old. Only about 1-2% of all the cinnamon that is still available has been planted in the last 25(!!) years.

Main crop is rice, eaten with chillies, eggs, chicken and small fish. Special occasions like weddings have beef rending. Food availability is good due to fertile lands around it, however vitamin C is sometimes hardly available. (Observations)

Average income in Lempur is about 1 million IDR (80 Euro) per month. This is relatively low, but since they are farmers and can provide a lot of food from their own crops. This means the basic needs are fairly well covered. (Mr. Daswarsan)

On 30 September 2007, the big earthquake hit this area, the mosque collapsed. Since the cinnamon price was too low at the moment, this was the first time that the proud people from Lempur turned to the government for helping them in rebuilding. Usually they just used Gotong Royong through the Adat and they all contributed with payments and work to rebuild it. When I came to the area I found out why they had never done this before: the mosques is still in the same state as it was just after the earthquake.

Lempur Hilir is the smallest and least developed of the five villages of Lempur. When we arrived here it was very quiet, there were very few people on the street and it made a bit a spooky impression on me and my translator.

Selam Paung

A lot of land in Selam Paung is owned by people from Lempur. People are less developed than in Lempur and also less open to try new things. Most people are originally from the village itself and it used to be the end of the road, currently the road has been extended to Masgo, but it is very small and broken in many places, even the main road. The houses are very old and people depend on the small supplies of food that they can get despite many of the failed crops (Mr. Daswarsan).

The main crop is rice, also Krupuk Kulit was sold, which is Krupuk made of cow skin (not as tasty as some other Indonesian foods in my experience). Most people in Selam Paung are preoccupied with fulfilling their basic needs. They are scarcely motivated to change, take few risks. Only 5% of the people take risks, and only once their success is proven, their methods will be copied very fast.

Men earn about 50,000 IDR per day for helping other farmers, but there is not always work for them. Women earn about 35,000 IDR per day for the same work. When it is not harvest time, most people do not have an income. Cinnamon is not seeded here anymore, just like in other places in Kerinci. They just started a Sawit (palmoil) experiment in places where cinnamon used to be grown.

Kayu Aro

The good connection with the main road to Padang (7 hour drive) makes it easier for people to obtain different types of food and drinks. People have on average more to spend than in the Gunung Raya sub district (Lempur and Selam Paung). 70% of the crops that are grown are potatoes, this is also a much used crop for local dishes, while it is not so much used in Lempur and in Selam Paung it is not available.

Electricity and Internet/ Mobile Infrastructure

Lempur

95% of the village has electricity, however power shortages occur on daily basis.

Lempur itself does not have an Internet café, the closest one is in Lolo, a village about 20 minutes by motor bike

Selam Paung

Communication is very bad, cell-phones have bad signal, only at the Kepala Desa's house.

Kayu Aro

Every villager has electricity and power shortages are very rare.

Unlike Lempur and Selam Paung, the kayu Aro area has an Internet Café and different copy shops.

Human Capital Perspective

Education

Lempur

There are 2 elementary schools (see Figure 15 on the next page) inside the village and there are junior and senior high schools at walking distance in the adjacent villages of Lempur Mudik and Dusung Baru. Most people older than 40 have only finished elementary or junior high school. People between 15 and 40 have usually finished senior high school as well (Village Head Yunes Rusel)

The level of education in Lempur is relatively high since parents take pride in sending their children to good schools around the country or even abroad. However it does happen often that these younger people do not return. An overview of the different educational attainments of the 5 villages of Lempur, Selam Paung and Kayu Aro can be found in Table D1 below.

Village	University	Sr High	Jr. High	Only Elementary	No school
Lempur Tengah	20	25	30	19	6
Lempur Mudik	15	20	20	30	15
Lempur Hilir	5	15	20	38	20
Dusung Baru	10	20	30	30	10
Manjuto	20	22	17	30	11
Selam Paung	5	10	20	35	30
Kayu Aro	25	26	28	7	5
National Average*	No data**	30***	21	30	20

Table D1. Educational Attainment of Population in % of total population Lempur, Selampaung, and Kayu Aro (Kepala Kelurahan Lempur, Kepala Desa's Selam Paung and Kayu Aro, BPS, 2011).

Selam Paung

In the busy time, there is a lack of education, and that is why it is very hard to organize the farmers. Step by step is the only way forward to convince people to change, since they are very poor and poorly educated. (Mr. Irwan)

Kayu Aro

There are three kindergartens in Koto tengah, also there are three schools for studying the Quran. There is 1 elementary school in Koto Tengah, however more elementary as well as junior and senior high schools exist in the adjacent villages of Batang Sangir, Bendung Air, Koto Priang, and Sungai Panduk. People in the age group 40-70 usually have just gone to elementary school. Most people younger than 40 have attended senior high school. (Mr Surtuni)



Figure 15. 1 out of 2 Elementary Schools Lempur Tengah

Local Institutional Perspective

Gotong Royong

Gotong Royong refers to the Indonesian culture of people bonding together and helping each other with various different projects, like building the foundation of a new house, moving houses, etc. People do not expect help back directly, but when they are busy with a certain project, like a wedding, or building a house, they do expect to be helped as well.

Adat

The Tribe, The Elders, or in Indonesian: “Adat” are a group of wise old men in the village that come together regularly and can be consulted by villagers at any time they like. They always need to be available. It is a very respected position. The Adat have an official annual meeting to evaluate the implementation of their 10-year plans for the collection of 5 villages. All their activities have a social purpose.

Lempur:

Ethnic:

About 10% of the Lempur people come from outside the village. As long as they join the ethic codes, report to the government, report to the book and respect the rules of Adat and join social events like weddings, child births or funerals they will be accepted in the community.

Social Capital

Every October, the annual Adat gathering takes place (=Kenduri Adat). If you are registered in the book of Adat, you pay Adat tax and this will be used for social purposes, buildings (e.g. Kelurahan building = also meeting centre, sports facilities), mosques, schools, roads, cleaning rivers, etc.

Gotong Royong in Lempur is about building mosques together, the school, the foundation of houses, when people or their entire houses have to be moved to other places, etc. The invitation can be in the form of fruit or with the younger a cigarette. The KD will make announcements inside the mosque on Friday, when there is a special prayer where only men are allowed, about these types of Gotong Royong events, so that everybody knows about it. During the planting season for rice, irrigation systems are made together (Yunes Rusel)

The role of the Tribe (Adat)

The role of Adat in Lempur has its origin in a historical battle in 1903 between the Dutch colonizers and the then just recently formed Adat at Benteng, near Lempur. What many organisations seem to forget (but WWF did not), is that the influence of the tribe (adat) is still quite significant, especially in isolated areas like Lempur. These villages have a strong sense of community and rather pay the Adat Tax than the government tax, for example. According to Mr. Dayan, the fact that WWF consulted and cooperated with the Adat has been one of the reasons why the project of creating solid boundaries for the national park with the purpose of conserving it was a big success. The other reason was the fact that cinnamon prices dropped, and people stopped planting and harvesting cinnamon inside the park. (Mr. Dayan) This can be considered a classic example of development vs nature trade-off. When people start being developed more, population numbers grow and this is bad for the surrounding national park, this balance is hard to control for governments (WWF REPORT KERINCI SEBLAT 1996)

Other examples of the power that the Adat still enjoys are: the new evacuation road that the government wants to implement. The goal is to give people from the coast area a safer and higher haven to flee in the mountains in case of floods or tsunamis, at the same time it will provide people in the mountains with an evacuation route when an earthquake hits the mountains. When the Keppala Desa wants to implement new policy or projects, he first went to the Adat to propose this new measure. Conflict mediation in the area also still runs mainly via the Adat, rather than involving courts or judges. Because the Adat have more a social than a business function, Tripper has never contacted Adat before, however the new Cafe will have this social function and it may be very wise to consult with Adat before the Cafe will be built (Mr. Dayan)

When there is a wedding everybody helps with the preparation, the cooking and preparing, etc. However it is not only manpower, people will also donate rice, money, coconuts, and other materials. Before the wedding, the younger men go into the forest and find and chop wood for the fire. The elder men just stay in the village to chop the wood, found by the younger men. The young women do the cutting of the ingredients for the food and the elder women do the cooking part in large pans on open fire outside the

groom's house. The same elements are used at the bride's house, but everything is a lot bigger, the number of ingredients, the number of people that help, the number of people that are invited, the money spent, etc. This is mainly because of the matrilineal structure: after marriage the couple will start living at the bride's parents' estate.

Other examples of Gotong Royong (through Adat) include building the elementary school, the junior and senior high school, the only thing the government provided in these projects were the teachers at these schools. Also when people build a new house, they invite family from other villages and neighbours and other fellow villagers by giving them fruit invitation (banana leaf = sirih) or a cigar (for the younger generation) to help them build the foundation of their house, to help them move or help them by giving rice, money, coconuts. If you get an invitation, but don't help they will never forgive you, at the same time if people who expect an invitation, don't get one, they will be equally mad.

Selam Paung

The role of the Tribe (Adat)

Because of its isolated nature, just like in Lempur Tengah, the role that the Adat plays, is still very large. Small farmers don't have to pay workers, since it is mainly family or other gotong royong sources. The communities have tried potatoes and chillies but those failed in Selam Paung, since the fields were too wet. Today, predominantly rice is grown. In the rice fields they mainly ask advice about which pesticides to use, they experience a lot of trouble with crop diseases in their rice fields. (Mr. Irwan)

The Role of the Farmer Communities (GAPOKTAN)

Farmers within a farmer community meet each other every day, usually in the house of the head of the farmers community, to drink Kopi Kawa. Mr Iwan is the one who manages this money. From the 13 farmer communities at the GAPOKTAN, they stretch an area of 40 hectares and rice is the main crop. The role and influence of Gotong Royong differs between these communities. The communities report to him every month about their revenues, costs and profits. The farmers loan money from GAPOKTAN (government) at an interest rate of 1% per year. There is also 1 surveyor from the

government who checks whether money is spent wisely. Before GAP, farmers used the loans mainly for other things like TV's.

GAPOKTAN has 5 main functions:

1. Seeds providing
2. Pesticides providing
3. Helping farmers with any problems they report
4. Monitoring the budget for government loans (100 million IDR in total) (PUAB program)
5. Looking for or providing selling points for the associated farmers

(Mr Irwan)

Kayu Aro

Kayu Aro's population is a mix of different ethnic groups (javanese, malay, minangkabau) and does not have the sense of community and respect for the Adat that still exists in Lempur and Selam Paung. This also has to do with the fact that its connection with Padang is much better through a better infrastructure. Also the Indonesian government has sent many javanese people to this area in the past. Adat still exists, but its influence on real decision making is marginal compared to Lempur and Selam Paung (Mr. Surtuni)

Decentralization Perspective

Instead of one leader for the collection of villages and surrounding area, every village now has its own Kepala Desa. This also has had a large influence on empowerment initiatives in the area. Instead of supporting one big project in the entire area, there are many smaller projects in the different desas. Since the decentralization of the Indonesian government, Lempur Tengah has been divided into several villages (desa) that all have their own, by the people elected, chief of the village (Keppala Desa). Lempur Tengah has been divided into:

- A1 Lempur Tengah

- A2 Lempur Mudik
- A3 Lempur Hilir
- A4 Dusung Baru Lempur
- A5 Manjuto

To make cross case analyses, we also researched:

- B Selam Paung
- C Kayu Aro

	M	F	Families	Total Population
Lempur Tengah	796	787	463	1583
Lempur Mudik	435	429	278	864
Lempur Hilir	191	188	105	379
Dusung Baru	400	395	235	795
Manjuto	107	103	170	325
Selam Paung	427	402	228	829
Kayu Aro	863	836	460	1699

Table D2. Demographics 5 villages of Lempur, Selam Paung, Kayu Aro

Lempur

In light of the continued decentralization process in the Indonesian government structure, Manjuto is an excellent example that this process is still going on. Manjuto is a relatively new village created only 2 years ago in 2009 as a separate entity apart from Lempur Mudik. It encompasses an interesting mix of more wealthy land owners who have placed their house in this rather quiet area on the outskirts of the Lempur village. The surroundings can be characterized by an abundance of rice fields that are in perfect condition that give the area a beautiful green touch. The village also has a large sports field that is only used by children and not for official matches though.

Lempur is surrounded by the national park TNKS (Taman Nasional Kerinci Seblat). This adds to the isolatedness of the area since the WWF have “successfully” completed their 5-year project of creating official boundaries for the park. Since the realization of the importance of the national park for biodiversity, there has been an ongoing conflict of interest between the protectors of the park and local people. It is a conflict between the

goals of conservation (protectors) and development (local people) (WWF KERINCI SEBLAT REPORT, 1996).

Selam Paung

Because of its isolated nature, NGOs have never visited Selam Paung before. Dealings with the government are very rare in this area.

Kayu Aro

Other villages that are less isolated, like Kayu Aro did not experience the success that WWF had in Lempur, because the population in Kayu Aro is more a mix of different ethnic groups (javanese, malay, minangkabau) and does not have the sense of community and respect for the Adat that still exists in th Lempur. The mistake that WWF made, was that they only talked to Adat and the government, rather than involving the root cause of the problem of deforestation of the national park: the people. The people in Kayu Aro do not trust the government nor the Adat and may have been motivated when they were talked to directly rather than via these channels. (Mr. Surtuni)

APPENDIX E

TRANSCRIPT FOCUS GROUP DISCUSSIONS

18.45-19.00: Last Preparations

Arrive at Mr. Andi's, use tape to record.

Angga: Name, age, address, phone number, farm size.

19.00-19.20: Welcome + Introduction.

- *Ask Mr. Andi to tell my name and introduce*
- *Thank them very much for coming.*
- *Tell them my name. Show how it is written. Master student International Business Management, University of Groningen, Holland. That is why I came to Indonesia, this is research for my master thesis.*
- *Doing research for the University of Groningen in Holland and my special interest is empowerment of farmers and how people that live far away from a city can be helped to gather/ develop/ create new information with the goal of improving the living conditions of farmers.*
- *Please be aware that I will videotape this only because I do not speak Bahasa Indonesia. This is how I can look back the tape and Angga (translator) can translate the discussion. The personal details or the video tape will not be shown to anyone else than me, my translator and my university professor without your permission.*
- *Funny: my own uncle is farmer in the Holland. He has about 25 cows and makes cheese, milk and meat. If you have any questions about this or something else please feel free to ask me at anything at anytime you like.*

19.20-19.30: Discussion 1: Information Needs

Research Question: 1)How do farmers share information with each other, 2)and what information do farmers need from outside and 3) in what way to provide this information?

Example: that farmers see that their crops of chillies fail, but don't know how or what to do about it. Or don't know where to get this information?

Q1: What information do you need to sustain your farm?

Nopalion:

Business prospect is the first information I need: which crops have the most prospect for business. This is usually discussed by small farmers with 5 hectares of land or less. The second type of information I need is how to market my crops. Farmers in this area have an abundance of natural resources, but are sometimes confused how to sell their crops. They don't know the right ways for this. There are a lot of business men that encourage the farmers to grow certain crops, but afterwards they don't have a place to sell. The third type of information is about money models. We need more information on how to obtain capital to start growing crops. In 10 years, only 25% of the farmers will be able to continue farming if this stays the same. Because at the moment, every farmer here has approximately a minimum of 0,5 hectares of land. If it stays like this, in 10 years, this will be reduced to about 0,25 hectares. Farmers have to sell their land to obtain money at the moment. They usually have no other choice. An idea: if we want to change this, the big farmers should give loans to the smaller farmers.

Dayan:

Mr Dayan usually usually talks to farmers about empty pieces of land. He encourages them to plant crops. 2,000 Hectares of empty land in total approximately. The empty land predominantly used to be cinnamon farms. So why is the land empty? Because they don't have enough money to replant, they need money for workers, seeds, etc. and they don't have that in many cases. In 2000, if people wanted to plant in 2.5 hectares, they just needed about 3 million IDR, but today this amount has risen to about 12 million IDR. This is too expensive! Another thing about these empty lands: at the moment there are no solutions from the government. The government never advises about which crops to plant on the empty lands.

Radius:

The first thing is information about how to organize the land: from seeding until harvest. The second information is about models of money. Money schemes. That's it.

(people laughing because he says this is my story, it's short, I know)

Andi Ismet

(first says: ok this is going to be longer, people laugh again)

He is really sad when he thinks about the conditions of farmers in Gunung Raya and Lempur specifically. The first thing is about the condition of the economy, especially of the small farmers. They don't know how to cope with changing economic conditions. For example, in the 70's there were many farmers going to the hills and planting seeds there. But now, even when motorcycles and cars can reach the hills, the farmers still don't want to plant in the hills. People do not have enough money to plant anymore, the economic conditions are too bad. The natural conditions in Gunung Raya is really good, however the human capital and capabilities fall short. Basically they can handle it, the problem is they don't have the money. Farmers turn to cheap and fast crops like chillies, and this is why they get viruses and crops fail. Sometimes, when they do have good crops, the prices are very low and pesticide costs high. And when their crops have viruses or diseases the price is usually good. There is no control or monitoring from the government on this process. For the future, we need your help to improve these conditions. Because if it stays like this, in the short run, there will be no more cinnamon anymore for the Europeans. Again he emphasizes the great natural conditions of the area, but the only problem is that people don't have enough money. The government doesn't do anything to help the farmers. When the government start a project or gives money, they give it to the big farmers in the hope that they will pass on to the smaller farmers. However this does not happen. For example: the government once gave 10 million IDR to the farmer community. There are 10 farmer communities, so each one got 1 million to spend. And every small farmer just got 100,000 IDR. We hope that you will help us to further build on the natural capital of the area. So that we can successfully deal and pass this problem.

If you want to start a business here, please deal directly with the small farmers. The small farmers are really honest, if we say something we will keep our promise.

Tasyar:

I just have some small other suggestion, since most has been stated by the others already. He is a former chili farmer, came just back from Bali and now is back to farming here again. He stopped the chillies because they got viruses. In 2005, when viruses hit the chillies, the entire Gunung Raya sub district lost 2 billion IDR of crops. One individual farmer probably lost around 20-30 million IDR. The information we need is research results on how to stop viruses in chillies. Concluding: the most important information that we need is how to stop viruses.

(we ask who is the next one to speak)

Dayan:

Some of the people do not speak Bahasa Indonesia very well, however they understand what we are talking about. There are a lot of people who speak Bahasa Indonesia, however we brought people from many different backgrounds to get a grasp of the real situation.

Q2: From whom do you get this information? Neighbours/ family/ people in the pesticide store, on which day and where is information most shared about farming?

19.30–20.00: The Pondok Idea

- The university works together with the Indonesian company: (TRIPPER).*
- Tripper buys a lot of cinnamon from Pak Hadji Santani.*
- Tripper wants to create a feeling of Gotong Royong with a Pondok where they can get free coffee and free water. Not a place for business but for social and especially Information function.*

- *The Café will be built on a piece of land of about 5 hectares in the Kecamatan Gunung Raya, there is no definitive location yet.*

- *A small Pondok will be in the middle.*

1) Around there will be many small pieces of land with crops so farmers can see how to grow them

2) There will be free drinking water and free coffee for every farmer.

3) Also there will be one person hired by Tripper who has 1 computer with Internet. If farmers have questions, they can ask him. He can also give information about market prices and what happens to cinnamon afterwards.

4) Showroom with finished products to show people where the cinnamon is going, the company hopes this will make people feel proud. Examples of finished products are: bread, cookies, cinnamon tea, cinnamon syrup.

5) agriculture exerts and researchers will stay there to educate about crops.

- *Why? 1) Self interest: Connect & Create Partnership with its cinnamon suppliers and*

2) Farmer interest: Help the farmers and make the supply chain more transparent for them.

3 big fears of small farmers (Mr. Andi):

1. They are afraid that I am doing this research for the big farmers. The small farmers don't like some of the big farmers, because they don't care about the rights of the people.

2. If the Café will not be a success, they will be left with the ruins. People have been disappointed in the past.

3. If the Café WILL become a success, they are afraid that only the big farmers will take benefits from the Café. That they will claim it as theirs.

19.45-20.00: Discussion 2: Pondok Acceptance

Attitudes towards the Pondok. Respondents are free to give their opinions about the Pondok idea as explained to them.

Q2: Will it make people feel suspicious?

Nopalion:

People usually don't trust cinnamon big collectors or companies because of the following reason. Let me give an example about cinnamon transactions in this area. When the cinnamon price is high, there is no interest from the business men. But when the price is lower, even just 100 IDR there are a lot of comments from the business men. When the price is high there is no information from the business men about this. They keep the extra profit themselves. The farmers have very limited resources and education so they don't have access to the actual market prices. They don't know when the price is going up, they only let it know when the price is lower.

Andi:

I have a question: if Tripper will build this Café. To what extent will they really involve the small farmers? We are afraid that we are going to be manipulated. That we just become small hard workers in the Café. The Café will only involve the people for small projects and after that they have to leave again.

Farshin:

The small farmers will be involved more than the big farmers by giving them an ID-card they can become members of the Café. Why: self-interest: create a partnership, connection with the cinnamon suppliers. Second: they want to help the farmers: create a feeling of Gotong Royong. And make them know what happens to the cinnamon after they sell it: transparency and make them proud.

Andi:

Can you make sure that the ID-card is not just for the big farmers and get a lot of ID-cards and rights to the café while forgetting the small farmers. We want to have the same position and rights as the big farmers.

Farshin:

The reason for the ID-card is for the small farmers. The only reason for the ID-card is to help the small farmers.

Q1: Will it make people feel excited?

People say it will make people very excited. (socially acceptable, we can not tell this for sure)

Q3: How long will it take before people trust that the Café is not a place for business?

Dayan:

It is better to build it as soon as possible. When people already have an ID-card and go to the Café and will get valuable information. Once they come back to the village, they will tell the others. And this word-of-mouth communication will spread very fast. And then everything can go very fast. The sooner it will be built, the better, because this might be the first center of information for farmers in the Jambi province. It will act as a role model for the farmers in this area.

Nopalion:

I would like to ask you a lot of questions. The first question is: what are the things that you want to get out of this Café? The second question: what do you want to see about the implementation of gotong royong in Lempur? Why did you bring up the Gotong Royong and what part of it do you want to see? I would also like to bring up the nature of lempur people. They are really quickly disappointed with things before they see the benefits of something. They give up quite fast. But if they already believe in something, they will use you as a role model, and then this café idea can become a success. Not only for Lempur people, but also for Indonesia in general. This is the first time that I hear about this concept. If it will be a success, it will make the people feel really proud, it will become an example for whole Indonesia. But if you want to make it a success, there is one key element that needs to be considered. The farmers are really honest, so earn and

especially keep their trust. Question 3: Is this a new idea or did you adopt this from other countries? If you adopt this from other countries, please tell us from which countries this is coming from? If this a new idea, there is one key: don't make the farmers disappointed! For example: the farmers are asking about a certain virus, if you give them wrong information, the farmers will very easily spread their bad experiences about your café among each other. Second, usually business men don't want to give new chances to farmers. People still think about this bad experience and will think that this idea has too much of a business background.

Farshin:

What I know from the company is that they want to get to know from the farmers. They have always bought from Santani, who is really important, they have noticed inconsistencies in supply. That is the first problem. How can this be changed? They hope that people will trust them and keep selling their cinnamon to Santani.

Example: it is hard to intercrop chillies with cinnamon, because of lack of sunlight. Show how to effectively intercrop 2 pieces of crop or more, this is what the Café hopes to aspire.

Explanation: How Gotong royong works in people sharing information with each other and on the other side gotong royong is used to explain why Tripper does this.

Nopalion: when explained that this is a new idea: he agrees, because he has never heard of this before.

(some people are asked why they don't join the conversation, conversation turns to dinner)

Nopalion:

If you build this Café, maybe Tripper will also be interested in importing ginger from here. There are a lot of cinnamon places in this earth, china, java, etc. why do they want to build it here in Lempur?

Farshin

The CEO was raised in Sumatra, company trades in many spices in Indonesia, that is why they place it in Indonesia in Sumatra, that is where they get most cinnamon.

20.00-20.15: Time to eat snacks, drink coffee, tea.

20.15-20.30: Discussion 3: Pondok Features:

What is most important of the following topics. Based on the information needs from the first discussion, they have the assignment to make a list of 10 Items with the ones that they would like to see in a Pondok. Decide as a group, they will have to appoint one person who makes the list and also make an order of which is most important.

Angga writes the suggestions they mention. Farshin makes suggestions from our own list.

Andy is the first one to write. Mr Dayan is discussing with Nopalion and Radius.

Tasyar is telling mr. Dayan that the most important information will be on how to stop a virus.

Farshin tells the 5 original ideas from Tripper

Mr. Andi hands over the paper to Dayan and mr Nopalion explains the ideas to every farmer in the room. Dayan is asking everybody one by one, however the most active one is Nopalion.

Mr. Tasyar asks Farshin about who the research will be reported to.

Farshin explains business and university perspective and research goals.

The first idea is information about viruses. The second is on places where to sell their crops. Nopalion: the café could be the place for marketing the crops.

Dayan says they already have 7 ideas.

1. *Info about viruses*
2. *Info about marketing*
3. *Money models/ schemes capital*
4. *How to make the best seeds*
5. *The price of cinnamon/ cassia vera*
6. *Which crops are needed by the international market (which have the best prospects)*
7. *Analysis of farming business: which crops will have a good price in a few months?*

Farshin: Thank you very much, this list will be given to Tripper and they will receive a note from Tripper (mr. Andi) before 10 October on the status of the project. We have some additional suggestions: please use from this complete list and make an actual order or top 10 of the most important ideas. Please decide on it together.

Dayan does not like that we only text mr. Andi (body language).

Farshin gives about 8 more suggestions and asks them to compile the complete top 10 and most important ideas.

Dayan is compiling the list. They make an overview of all the 15 things and hear that 15 ideas are too to implement at once. Tasyar: TV is not so important. They are discussing a way how to decide. Dayan: Number 2 is important, number 3 also. Number 1 is about viruses, this one is not circled, skipped by Mr. Andi. Mr. Andi says, ok if you want to forget about number 1 it is not really important (implicit conflict). Dayan says TV is not so important.

Nopalion gives his opinion about Tumpang Sari: intercropping information is very important, because most people don't have big pieces of land, so this would be very interesting especially for the smaller farmers.

Tasyar:

The value adding options may be very valuable for the home industry. People will really value this type of information.

Dayan:

It is not important to put it in the top 10, maybe Tripper should just provide it for free.

Farshin: yes, probably.

The 10 most important things are compiled in minute 31:31. Now they just have to make an order.

Dayan, Radius, Nopalion, Sahrin are the most important contestants in making the order.

Sahrin: the most important thing is making a lab for testing soil, they collectively decide to put in on No. 3.

They are deciding on where to put marketing. Nopalion: after marketing, the most important element is viruses, after that is how to make the best seeds. They want to learn how to make good quality seeds themselves.

They are still discussing on which one is more important: 7 or 5.

They are finishing at minute: 34:48. They are counting and checking the numbers in minute 35 and 36.

Minute 36:46. Finished. Next question

20.30-20.40: Discussion 4: Location and Time Pondok

Q1: where to place the Pondok?

The people appoint Mr. Andi to answer this question, since he knows the area very well.

Suggestions: will it be near Lempur/ Selampaung.

If we look at the near future, most farming area is around Lempur. The best place would be around the newly created village of Majunto. Because the new road that will be created, will go directly from majunto to Bengkulu: muko muko district. Why not in Selam Paung: a lot of people fro lempur only have a piece of land or farm there and return to Lempur every day. This is why it will not be an effective place.

Tasyar:

If we build it in Selam Paung, the farms are bigger in Lempur. The farms in Selam Paung are mainly owned by Lempur people. The people in Selam Paung also move very often. Lempur people are more stable.

Nopalian:

If you put the Café in Selam Paung, a very limited number of people will visit it. Also a lot of people who own the cinnamon in selam paung live in lempur so it will be too far away for them. Also: the farmers in this area have a large area of cinnamon and stabilize it, they have not cut it yet.

Q2: What would be the best opening times for the Pondok?

20.40-21.00: Discussion 5 about power Relations: Chapati Diagrams.

Draw circles of groups that influence them or give them information or societies they are in a relationship with. Please write what kind of action this group takes with them or what kind of information they give them?(governments, Collectors, pesticide companies).

- 1. The size of the circle decides how much power or influence this group has.*

Circles that are close are ones are ones that you deal with a lot, circles that are far away you almost never deal with.

Circles with a plus are ones you have a positive relationship with. Circles with a minus are ones with a negative.

Tasyar:

They find it difficult, but if we give a list of the different groups they are ready to make it.

Suggestions:

- Adat*
- Kepala Desa/ Kelurahan*
- Farmer community*
- PPL*
- Big collectors (Santani)*
- Small farmers*
- TNKS*
- NGOs like WWF*

Tasyar is the one who first writes the names. Asks if he can write the percentages of the amount of involvement with the farmers instead of the circles. After we explain again, they are ready to draw the circles.

44:56: They are now discussing whether there are more groups that influence them that have not been mentioned yet.

They find it difficult to put pluses or minuses. He asks us if they can answer it honestly. We answer that we are independent students. But they are afraid that we will explain the results to the big farmers. They prefer not to put the percentages or pluses or minuses.

Mr Andi:

Of all the 7 groups that are named, no one really helps the small farmers. Adat just encourages the small farmers to go to the paddy fields. But today, the Adat does not have

a really big power to encourage anymore. The Kepala Desa once got seeds and help from the government, but he sold it instead of helping the small farmers.

Farshin: we are not just interested in help, but also in influence and how much certain groups are dealt with.

From 1 to 7, we just have occasional relations when they need something from the small farmers. Only when there is something up a problem. So it is still difficult to put the circles.

Farshin: How important are family and neighbours. Family and neighbours are added to the list.

Nopalion:

The most important stakeholder that deals with the farmers is the Tokoh Masyarakat. Together with family and neighbours they are the most important people for farmers. TM is a person who encourages the people to plant crops, but he is not officially Adat, but really helps the people. They have experience to share with the people. They are people who give speeches in the mosque, but are not Adat, because they don't have the official Adat title. They are sometimes also family members. Literally it means community leaders, however they have no official liaison with any organization, they just have the respect of the people from their experience. Sometimes they give speeches in the mosque.

Andi:

Pedagang (supplier relations). Small farmers just have relations with big suppliers when they have relations.

Nopalion:

Relationship with NGOs. They only deal with them when they have special projects in this area. At the moment there are none.

The farmer communities are just here, because it is the only one that receives money from the PPL. PPL only gives help to the farmers through the farmer communities.

If you build the Café:

Tasyar:

Adat is the first. Next is the Kepala Desa.

Nopalion:

talking about the government: the government only come to the area when they have some really important.

Tasyar: says there is really little trust in the government. There is no trust in the farmer communities because they have provided fake, copied seeds. And apply corruption, they don't buy the real seeds. They don't give the real ones to the farmers.

Nopalion: minute 55 finally starts drawing the circles.

Nopalion: will put several numbers, because some of the groups only have occasional relationships with the farmers.

The first is tokoh masyarakat, they always give encouragement. (This is a good example of Gotong Royong). They always give encouragement and advice, even though they don't have to give it. If you are Adat, and people come to you with questions, they should give it. However they are seen by people as political actors who have certain interests. The Tokoh masyarakat gives advice without expecting something back. (Maybe give the Tokoh Masyarakat (neutral one, not involved in PPL, Adat, government, an advising role for a young person who operates the internet)

PPL, NGOs, farmer communities are not included in the circles because they have few dealings with them.

Nopalion:

Dayan is drawing an arrow between the PPL and the farmers communities. The PPL only works in a village where the farmer communities is active. And the farmer community will only work if the PPL give them something (seeds, money, loans). He also states that the supplier Pedagang is not included because there will are only occasional relations.

Nopalion is putting the numbers: and includes neighbours and families, because most of the times the neighbours are usually both at the same time.

If you are going to build the Café, you have to

Tasyar:

I think the Café is a good idea, because when we need information about how to solve problems, diseases, prices of cinnamon, vegetables, etc.

People will be happy with it.

Will people come there? Yes, yes!

Angga: The most important role is for the neighbours and family, after that the Tokoh Masyarakat, Adat, Kepala Desa. When people want to discuss something they discuss it with family and neighbours first, after that they will talk to the Tokoh Masyarakat. After that they might talk to Adat, Kepala Desa, or PPL.

TNKS only comes when there are problems with the national park.

There are no NGOs here anymore since they failed in the past.

For mr. Tasyar it is the first time he sees the cinnamon syrup.

END OF DISCUSSIONS.

FEEDBACK/ FOLLOW-UP

We have noted your phone numbers and addresses, so that we can contact you afterwards. If the Café will really be implemented can not be said with certainty.

You have given us valuable information and if it will be built there will be follow up of the results before 10 October you will receive more information about the probability that there will be a Café or not with a text message.

Thank you very much, you will receive a small cinnamon gift.