Building a brickmaker's cooperative in Lubuk Alung, Indonesia
an analysis of justifications and conflict situations emerging in the process of building the cooperative

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Award date:
2013
Building a brickmakers’ cooperative
in Lubuk Alung, Indonesia
An analysis of justifications and conflict situations emerging in the process of building the cooperative.

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Identity number 0761723
In partial fulfilment of the requirements for the degree of

Master of Science
in Innovation Sciences

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Preface

With this thesis, I will complete the master Innovation Sciences at the Eindhoven University of Technology. During the master Innovation Sciences, I have broadened and deepened my knowledge in many directions. I received within the master many opportunities to follow my own interests. This freedom allowed me to conduct my graduation research in a post-disaster context of a developing country. Only three and half years before my arrival in Padang, Indonesia, a major Mw 7.6 earthquake had hit the region. The earthquake had taken the lives of 1,195 people and 140,000 houses were significantly damaged (Earthquake Engineering Research Institute, 2009). The northern and western parts of Sumatra are located in one of the most seismically active regions in the world.

First, I want to express my gratitude for the many opportunities I received in the Netherlands and in Indonesia to conduct this research into the process of building a brickmakers’ cooperative in Lubuk Alung. I want to thank Tom from Build Change for receiving me in Indonesia and giving me the chance of conducting a graduation research at Build Change Indonesia (BCI). Furthermore, I would like to thank the Build Change organization for the provision of a bed, desk, transportation and a translator during my stay at the BCI office in Padang. I also want to thank the BCI employees for supporting me in conducting the research and for the unforgettable time in Padang. In particular, I would like to thank Andre, who supported me as a translator and research assistant (from BCI), but also became my best friend in Indonesia.

I want to thank my supervisor Saurabh Arora for his support and guidance through the many difficulties encountered in the process of conducting research in Indonesia and writing the master thesis.

My gratitude also goes to the many brickmakers and other people I met in Indonesia and for their limitless support and hospitality during the interviews, surveys and observations in the field. Finally, I want to thank Mr. Agung and his wife Mrs. Tika, who gave me the opportunity to experience the working and living of a brick-making family in Lubuk Alung, who gave me a place to sleep, and who showed me how to use the river to wash myself after a hard day’s work.

Enjoy reading,

Joep de Boer

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December, 2013
Executive summary

This research investigates the process of building a brickmakers’ cooperative in Lubuk Alung regency, West Sumatra, Indonesia. In the end of 2012, the NGO Build Change initiated the Better Building Materials (BBM) project. The project was aimed at improving the quality (and seismic resistance) of the clay bricks produced in Lubuk Alung regency by means of building a brickmakers’ cooperative. This cooperative should provide loans, training and guidance, the collective marketing of bricks and increase the disaster resilience of the brickmakers.

Research objective and applied theory

The objective of this research is to analyse the invoked justifications by the brickmakers for the building of a brickmakers’ cooperative in Lubuk Alung regency. The justification theory of Boltanski and Thévenot (2006) has been applied in this research to investigate and analyse the different invoked arguments and justifications. The justification theory could be invoked to assess social actions that require justification, for instance, in situations of dispute. Boltanski and Thévenot developed six common worlds (i.e. the domestic world, world of inspiration, civic world, world of opinion, market world and the industrial world), which could be invoked to make a justification. Each world consists of a common principle of equivalence. Due to this common principle of equivalence a certain generality between people, adhering to the same world, is created. Each world contains an underlying logic or principle of order, which can be used to assess the worth of a justification (in the relevant world). However, a justification can belong to multiple worlds and thus having multiple levels of worth (depending on the invoked world). If two conflicting justifications are made in one world, the involved actors should conduct a reality test to assess which justification is considered the worthiest in the relevant world. In a reality test, the common principle of equivalence is used to assess which justification is the worthiest. If two conflicting justifications are made in two (or more) opposing worlds a reality test is impossible, due to the differently invoked principles of equivalence. In these composite situations a common higher-level principle of equivalence should be established. This higher-level principle would take over the two formerly invoked principles. Objects could be qualified for the higher-level principle in order to support the new higher-level principle. ‘Workers rights’ is an example of a higher-level principle of equivalence based on the civic world (people have rights) and the industrial world (in which workers are assessed as valuable). A new stabilizing object, which supports the higher-level principle of ‘workers rights’, could be the ‘minimum wage’. 
Research question and method

The central question in this research is: How do the brickmakers in Lubuk Alung regency justify the building of a brickmakers’ cooperative? In order to answer this question first an elaborate picture of the brickmaker and the brick-making practices is provided. Subsequently, the opportunities and barriers encountered in the process of building the cooperative in Lubuk Alung regency are identified and discussed in detail. Finally, an extensive analysis of how the brickmakers’ justify the building of a cooperative is carried out by means of the justification theory. The justification theory provides a framework to identify the underlying worlds of the invoked justifications. The analysis has subsequently given special attention to potentially emerging conflict situations and their resolutions.

In order to identify the opportunities and barriers perceived by the brickmakers a number of interviews, two focus group meetings and a questionnaire-based survey (n=30) were conducted.

Opportunities and barriers

The biggest opportunity identified by the brickmakers for the building of a brickmakers’ cooperative in Lubuk Alung regency is access to capital. Many brickmakers face financial difficulties due to external influences (weather and fluctuating brick prices). A second perceived opportunity is the setting up of brick-making training program by the cooperative. In collaboration with universities and NGOs, a cooperative could develop a set of ‘best practices’ and brick-making standards to improve the brick-making process and the bricks. A third, related opportunity is the establishment of a quality control system: if the bricks satisfy a certain quality level they will be awarded with a hallmark. The fourth identified opportunity is the collective marketing of bricks. By uniting the brick sale, the brickmakers can exert control the local brick prices to a certain extent due to their large volume of bricks.

The research did also yield a number of barriers for the building of a cooperative. The biggest perceived barrier by the brickmakers is their lack of money. Almost half of the brickmakers has to borrow regularly money in order to meet domestic and/or business needs. Without sufficient capital accumulated by the brickmakers it would be very difficult to build a cooperative. A second barrier is the bad reputation of brickmakers’ cooperatives in the area, constructed by rumours of preferential treatment by the former (2005-2007) brickmakers’ cooperative board and stories about disobeying cooperative members. Another important identified barrier consists of resisting actors. The provision of cooperative loans and the establishment of collective brick marketing would displace the moneylenders and the brick vendors active in the brick industry of Lubuk Alung regency.
**Justifications**

The opportunity of access to capital is justified from both the market and the industrial world without them being in conflict with each other. A justification based on multiple worlds without being in conflict does not need a common higher-level principle. The invoked worlds can be used interchangeable. The opportunity of setting up of brick-making training program is solely based in the industrial world, due to its objective to train the brickmakers and hence increase their efficiency and productivity. The third opportunity of establishing a quality control system is again justified by the industrial and the market world, making it a composite situation without opposite worlds in this situation. The fourth opportunity of collective marketing is justified by the market world due to its objective of increasing the brick profits for the brickmakers. Finally, the invoked disaster resilience opportunities are predominantly based on collective action and community engagement and therefore located in the civic world.

The identified barriers for building a brickmakers’ cooperative are predominantly justified in the industrial world. The lack of capital available for the brickmakers hampers the building of a cooperative. This barrier is rooted in the industrial world because the brickmakers are not wealthy enough to realize sufficient money for the building of a brickmakers’ cooperative. The barrier created by the rumors about preferential treatments and stories about disobeying former cooperative members create a burden for the building of a new brickmakers’ cooperative in Lubuk Alung. The problem of preferential treatment by the cooperative its management can be argued as a lack of justification for the civic world. However, the bad reputation of the former cooperative does also create a lack of justification regarding the world of opinion. This barrier is a composite situation without conflict pertaining to the civic world and the world of opinion. A final barrier identified in this chapter is related to the opportunity of setting up a quality control system. The associated quality measures and additional practices to ensure good quality bricks may extend and complicate the brick-making process and become a burden for small brickmakers. Increasing the complexity and decreasing the efficiency of the brick-making process would be considered as a justification from the industrial world.

**Conclusions and implications**

The most remarkable finding of my analysis is that the brickmakers included in this research mainly hauled justifications from the market and industrial worlds for building a cooperative. This finding is in contrast with the cooperative principles developed by the International Co-operative Alliance (2012), which pertain to the civic world. The brickmakers on the ground do have distinct requirements and incentives (justifications) than the imposed principles from above (i.e. in a top-down initiative, the international organizations, NGOs or government institutions). The identified discrepancy highlights the importance of an transformation to bottom-up perspectives in top-down initiated projects.
# Table of content

Preface ........................................................................................................................................... ii

Executive summary ......................................................................................................................... iii

List of figures .................................................................................................................................... 1

List of tables ..................................................................................................................................... 1

List of boxes .................................................................................................................................... 1

Abbreviations .................................................................................................................................... 2

1. Introduction ................................................................................................................................. 3
   1.1 Lubuk Alung regency .............................................................................................................. 3
   1.2 Problem definition ................................................................................................................... 4
   1.3 Research objectives ............................................................................................................... 5
   1.4 Research question .................................................................................................................. 6
   1.5 Scientific relevance ............................................................................................................... 7
   1.6 Report outline ...................................................................................................................... 8

2. Theory and method ...................................................................................................................... 9
   2.1 Justification theory ................................................................................................................. 9
   2.2 Research method ................................................................................................................... 18

3. Literature review .......................................................................................................................... 27
   3.1 What is a cooperative? .......................................................................................................... 27
   3.2 Producers’ cooperatives in developing countries ................................................................. 29
   3.3 Opportunities for building a producers’ cooperative ............................................................ 30
   3.4 Barriers for building a producers’ cooperative ..................................................................... 33
   3.5 Conclusions .......................................................................................................................... 35

4. Brick-making in Lubuk Alung ..................................................................................................... 37
   4.1 The brickmakers in Lubuk Alung .......................................................................................... 37
   4.2 How are the bricks made? ...................................................................................................... 43
   4.3 Conclusions .......................................................................................................................... 51
5. **A future brickmakers’ cooperative in Lubuk Alung** ................................................................. 52
   5.1 Cooperatives in Lubuk Alung regency .................................................................................. 52
   5.2 Build Change’s Better Building Materials project ................................................................ 54
   5.3 Build Change Indonesia’s perspective on building a cooperative ....................................... 57
   5.4 The brickmakers’ perspectives on building a cooperative ................................................... 59
   5.5 Conclusions ......................................................................................................................... 63

6. **Justifying the building of a cooperative** ............................................................................... 64
   6.1 Building a cooperative: a situation of dispute ..................................................................... 65
   6.2 Opportunities for building a brickmakers’ cooperative ....................................................... 65
   6.3 Barriers for building a brickmakers’ cooperative ............................................................... 74
   6.4 Conclusions ......................................................................................................................... 79

7. **Summary and conclusions** .................................................................................................. 82
   7.1 Summary of findings ........................................................................................................... 82
   7.2 Discussion and implications ............................................................................................... 87

Bibliography .................................................................................................................................. 90

Appendix I - List of interviews .................................................................................................... 95

Appendix II - Questionnaire ........................................................................................................ 96

Previous MSc thesis in technology and development studies ...................................................... 99
List of figures

Figure 1.1: Lubuk Alung regency highlighted in the Padang-Pariaman district…………………………………….. 3
Figure 2.1: The four regimes of action………………………………………………………………………………….. 10
Figure 2.2: Graph indicating the years in business of the surveyed brickmakers………………………………… 21
Figure 4.1: Graph indicating the average capacity per kiln of the surveyed brickmakers…………………………… 39
Figure 4.2: Scheme with the successive steps in the process of making bricks…………………………………….. 43
Figure 4.3: Pictures of (a) a hillside in a brickyard dug out by hand (b) a large sand and clay pit excavated by excavators……………………………………………………………………………………………………. 44
Figure 4.4: Pictures of a mixing pit with (a) a buffalo mixing the sand and clay and (b) digging the mixture by hand……………………………………………………………………………………………………... 45
Figure 4.5: Pictures of (a) the mixing machine, (b) the input funnel and (c) the output of the machine… 45
Figure 4.6: Pictures of the molding process of bricks by means of the wooden mold………………….. 47
Figure 4.7: Pictures of (a) the piling of bricks in a kiln (b) a kiln (without roof) filled with finished bricks and (c) an empty brick kiln with a capacity of 60,000 bricks…………………………………………………………. 48
Figure 4.8: Pictures of (a) the tunnel on the bottom of brick kiln (b) a tunnel during the firing process (c) the two outside layers of bricks stacked differently to keep the heat in the kiln…………………………………….. 49

List of tables

Table 2.1: The six worlds and the criteria comprising a reality test (Thévenot et. al, 2000)……………… 13
Table 4.1: Number of kilns per surveyed brickmaker (or brick-making business)………………………….. 38
Table 4.2: Brickyard rented or owned by the surveyed brickmakers……………………………………………… 40
Table 5.1: Reasons to join a future cooperative indicated by the surveyed brickmakers…………………………. 60
Table 5.2: Reasons of the surveyed brickmakers to refrain from joining a cooperative………………………… 61
Table 5.3: Money lending and the use of a moneylender………………………………………………………….. 62
Table 5.4: Investment fee and monthly membership fee as barriers……………………………………………….. 62

List of boxes

Box 3.1: The seven guideline principles for cooperatives, adopted from (ICA, 2012) ......................... 28
Box 5.1: Reasons for building a brickmakers’ cooperative in Lubuk Alung regency, drafted by Build Change Indonesia (Build Change Indonesia, November 2012)…………………………………………………….. 57
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBM project</td>
<td>Better Building Materials project</td>
</tr>
<tr>
<td>BCI</td>
<td>Build Chang Indonesia</td>
</tr>
<tr>
<td>BPBD</td>
<td>Badan Penanggulangan Bencana Daerah (Regional Disaster Management Agency)</td>
</tr>
<tr>
<td>COPAC</td>
<td>Committee for the Promotion and Advancement of Cooperatives</td>
</tr>
<tr>
<td>DRR</td>
<td>Disaster Risk Reduction</td>
</tr>
<tr>
<td>GTZ</td>
<td>Gesellschaft für Technische Zusammenarbeit (German Society for Technological Cooperation)</td>
</tr>
<tr>
<td>ICA</td>
<td>International Co-operative Alliance</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labor Organization</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>KUD</td>
<td>Koperasi Unit Desa (Village Cooperative)</td>
</tr>
<tr>
<td>MFI</td>
<td>Microfinance Institution</td>
</tr>
<tr>
<td>MIEs</td>
<td>Micro Enterprises</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-governmental Organization</td>
</tr>
<tr>
<td>Rp</td>
<td>Rupiahs (Indonesian currency)¹</td>
</tr>
<tr>
<td>SMEs</td>
<td>Small and Medium Enterprise</td>
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</tbody>
</table>

¹ Rp 12.500 is approximately 1 euro (source: [http://www.xe.com/currencyconverter](http://www.xe.com/currencyconverter), May 18, 2013)
1. Introduction

This research is about small-scale brick-making in Lubuk Alung regency, West-Sumatra, Indonesia. The bricks in this area are made in a ‘traditional’ way (i.e. without the use of mechanical tools). Sand and clay are mixed with the help of a buffalo; bricks are formed in wooden molds by hand; and eventually the bricks are fired in a wood-fired kiln. The bricks are made by small brick-making family businesses, which face many technological and financial difficulties in keeping their businesses running. The NGO Build Change proposed to build a brickmakers’ cooperative with the brickmakers from Lubuk Alung in order to solve some main problems of the brickmakers and as a means to improve the quality and seismic resistance of the bricks made. This research investigates the process of building a brickmakers’ cooperative in Lubuk Alung regency. The following section introduces the geographical area of investigation. The subsequent sections provide the problem definition, the research objectives and the research question. Then the scientific relevance of the research is discussed and eventually the last section of this chapter provides a brief outline of the thesis.

1.1 Lubuk Alung regency

There are two major brick-making areas in the province of West Sumatra. The first is the district of Bukittinggi and the second is the Padang-Pariaman district. The brickmakers in the Padang-Pariaman district are dispersed over Lubuk Alung regency and the neighboring northern and western regencies (see Figure 1.1).

Figure 1.1: Lubuk Alung regency highlighted in the Padang-Pariaman district.
The geographical borders of Lubuk Alung regency demarcate the area of investigation for this research. Lubuk Alung regency covers an area of 111.63 km² and has a population of 40,661 people (District government of Padang-Pariaman, 2009). The regency is situated approximately 40 kilometers north of Padang, the capital of West Sumatra with more than 900,000 inhabitants. Lubuk Alung regency borders in the east and north with the forested Sumatran mountain ridge. The majority of the inhabitants of Lubuk Alung regency are living in the regency’s eponymous capital Lubuk Alung. A small number of villages characterize the rural area of the regency. No official statistics were available on the number of brickmakers in the regency of Lubuk Alung. Some rough estimates indicate that there are approximately 200-300 brickmakers in the area. At the time of research (January-April 2013), the number of brickmakers in the area was considered quite stable, although the 2007 and 2009 earthquakes had caused an increase of brickmakers in the area due to the tremendous brick demand for the post-disaster reconstruction (Build Change Indonesia, November 2012).

1.2 Problem definition

The NGO Build Change proposed to build a brickmakers’ cooperative in Lubuk Alung regency as a means to resolve the technological and financial difficulties encountered by the brickmakers. During the reconstruction process in the aftermath of the 2009 West Sumatra earthquake, the brick quality appeared to be the one of the major causes for the collapse of many (residential) buildings during the earthquake (Build Change Indonesia, November 2012). The province of West Sumatra is an area particularly vulnerable to earthquakes. It lies in one of the most seismically active regions in the world. Recent reports indicate a large earthquake of magnitude 8.8 or above is likely to hit the area in the coming decades (McCloskey, et al., 2008; Hilman, Sieh, McCAughey, & Lubis, 2012). Build Change viewed the bad quality (from the perspective of seismic resistance) of bricks as a central barrier in developing effective earthquake resilience in Lubuk Alung regency. This barrier was caused by technological problems (e.g. incomplete firing) and financial problems (e.g. poor conditions of the brickmakers) encountered by the brickmakers (Build Change Indonesia, November 2012). Therefore, the brickmakers’ cooperative, that Build Change aimed to institute, was not only focused on the symptoms of the problem of bad quality bricks, but also on the deeper internal problems encountered by the brickmakers.

The topic of this research is the process of building a cooperative of brickmakers in Lubuk Alung regency. Many actors have to collaborate in order to build successfully a cooperative. The involved actors have different opinions and ideas about the functioning and the future role of the cooperative.

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2 Ade (village leader Pasia Laweh), interview, Pasia Laweh, January 31, 2013; Utami (government representative of the regional Department of Industry), interview, Pariaman, February 26, 2013.

3 On September 30, 2009, West Sumatra was hit by an Mw 7.6 earthquake causing 1,195 deaths and significant damage to 140,000 houses (Earthquake Engineering Research Institute, 2009).
complicating the process of building a cooperative supported by all people. This research investigates and analyses the various invoked arguments and justifications for supporting or opposing the building of a brickmakers’ cooperative in Lubuk Alung regency.

1.3 Research objectives
This research is in particular concerned with the investigation of the various invoked justifications and their associated worlds by the actors involved in the process of building a cooperative. These identified justifications and worlds are used to investigate the potentially emerging conflict situations between the involved actors. Conflict situations are in this research defined as disagreements between stakeholders of the cooperative building process (e.g. a disagreement about the primary function of the cooperative). The justification theory of Boltanski and Thévenot (2006; 1999) has been applied in this research to investigate the invoked justifications and the potentially emerging situations of conflict in detail. Boltanski and Thévenot (2006) have conceptually developed six common worlds (i.e. civic world, world of opinion, world of inspiration, domestic world, market world and the industrial world) which could be invoked to justify a social action. Each common world consists of a principle of equivalence based on its internal characteristics. A principle of equivalence is required to reach a level of generality between the involved people and to base the justifications made on. For instance, in the civic world the principle of equivalence is the collective will and welfare based on its internal characteristics of equality and solidarity. In the civic world individual goals and aspirations are put aside for the common good. The creation of partnerships, collaborations and collective actions are worthy in contrast with personal merits or individual success.

The justification theory made it possible to conduct an extensive analysis of how the identified barriers and opportunities are justified by the brickmakers, and to which worlds these justifications pertain. The expected (composite) conflict situations and their possible resolutions are further examined and discussed by means of the justification theory. In particular, the justification theory is very suitable for investigating and analyzing how a set of individuals (i.e. the brickmakers) appeal to different principles (or worlds) for making their justifications. The theory provides subsequently a number of tools to analyze how potential conflict situations can be resolved. For instance, the execution of a reality test to assess which justification is the worthiest according to a particular world or underlying principle. The primary finding of the executed analysis in this research is that the brickmakers in Lubuk Alung regency predominantly invoke the industrial and the market world in their justifications for the building of a brickmakers’ cooperative.
In order to delineate an elaborate picture of the invoked justifications and the potential conflict situations emerged in the process of building a brickmakers’ cooperative I have formulated three research objectives:

1. Provide a detailed picture of the brickmakers and the brick-making practices in Lubuk Alung.
2. Identify the perceived barriers and opportunities for building a cooperative.
3. Analyze how the identified barriers and opportunities are justified, and which conflict situations could arise in the process of building the cooperative.

1.4 Research question

In situations of conflict, the actors involved can express their opinions and ideas with justifications belonging to the same or different worlds. If the actors have invoked the same world, a reality test should be executed to assess which justification is the worthiest. By running a reality test, the involved actors assess which justifications are considered the worthiest in one particular world. However, when multiple worlds are invoked a composite situation has emerged. When a composite situation is emerged due to a dispute, the involved actors have to adhere to a new common higher-level principle only relevant for the associated situation.

As indicated in the research objectives, this research is also focused on the potentially emerging conflict situations between the involved actors in the process of building a brickmakers’ cooperative. These possible conflict situations become apparent when investigating the different invoked justifications and related common worlds adhered to by the actors involved in the process of building the brickmakers’ cooperative. Therefore, the following research question has been formulated:

*How do the brickmakers in Lubuk Alung regency justify the building of a brickmakers’ cooperative?*

Sub-questions:

1. *How are the bricks made in Lubuk Alung regency?*
2. *What are the barriers and opportunities of building a brickmakers’ cooperative?*
3. *Which different common worlds do the brickmakers invoke in their justifications for building a cooperative?*
4. What conflict situations do emerge in the process of building a cooperative? How can these conflict situations be resolved?

The four sub-questions are formulated in order to come gradually to an answer on the central research question. The first sub-question, about the brickmakers and the brick-making process provides an elaborate picture of the context and background of this particular case. A detailed description of the brickmakers and their brick-making practices is necessary for a proper understanding of the perceived opportunities and barriers and their justifications made by the brickmakers. Then the second sub-question delves into the actual process of building the cooperative. The question addresses the various opportunities and barriers perceived by the brickmakers for building a new brickmakers’ cooperative. The third sub-question analyses the invoked justifications and associated worlds of the brickmakers in relation with their perceived opportunities and barriers. Finally, the last sub-question addresses the potentially emerging conflict situations and their possible resolutions.

1.5 Scientific relevance

Literature about cooperatives indicates that cooperatives could make significant contributions in developing countries regarding poverty alleviation (Birchall, 2003; Hulme & Montgomery, 1994). Therefore, by investigating the process of building a cooperative this research could make an important contribution for NGOs and other organizations that want to apply cooperative development strategies in developing countries. The existing literature about small-scale producers’ cooperatives in developing countries pays little attention to the actual process of building a cooperative. The literature is predominantly concerned with the functioning of the cooperatives (e.g. about potential of cooperatives in developing countries to alleviate poverty (Simmons & Birchall, 2008)). Using the justification theory of Boltanski and Thévenot (2006) this research provides a better understanding of the possible emerging situations of conflicts in the cooperative building process. An extensive analysis of how the identified barriers and opportunities for building a cooperative are justified and what their corresponding orders of worth are provides a new perspective on the process of building cooperatives with similar circumstances as the future brickmakers’ cooperative in Lubuk Alung regency. This research thus provides an original contribution to the knowledge about the process of building small-scale producers’ cooperatives in developing countries.
1.6 Report outline

The second chapter starts with an elaborate discussion of the justification theory of Boltanski and Thévenot (1999; 2006). This theory is used to answer the research question and is developed in order to investigate social actions that require justification. These social actions occur predominantly in conflict situations that need to be resolved. The second part of this chapter provides a description of the research method used during the fieldwork in Lubuk Alung regency in Indonesia. In the third chapter, the existing literature about the process of building a cooperative for small-scale producers in developing countries is reviewed in detail. Then in the fourth chapter, a detailed description is given of the brickmakers and their practices of making bricks. Subsequently chapter five analyses the perspectives of both the brickmakers and Build Change for a future brickmakers’ cooperative in Lubuk Alung. Thereafter, the sixth chapter provides an analysis of the justifications invoked by the brickmakers for the perceived barriers and opportunities. Possible solutions for the emerged conflict situations are analyzed by means of the justification theory. In the last chapter, a summary of findings and a discussion is given in order to answer the research question of this research.
2. Theory and method

This chapter starts with a discussion of the employed justification theory (Boltanski & Thévenot, 1999). Boltanski and Thévenot developed a framework with six different modes (or worlds) of justification which could be applied in a conflict situation in which equivalences play an important role. Each world consist of a different logic or rule of justification (e.g. in the domestic world personal interdependencies, such as family ties, are very important). The theory is used to analyze the various arguments and justifications invoked by the brickmakers in the process of building a brickmakers‘ cooperative in Lubuk Alung regency. After an extensive elaboration of the justification theory, the research and fieldwork methods are discussed in the second section of this chapter.

2.1 Justification theory

The justification theory is developed in order to assess social actions that require justification. This is especially apparent in conflict situations, which can be understood as “disagreements either about whether the accepted rule of justification has not been violated or about which mode of justification to apply at all” (Boltanski & Thévenot, 1999, p. 359). If the involved actors use the same mode of justification, agreements can be reached by putting the arguments to a test. However, when the actors apply different modes of justification, a compromise should be made between the applied modes of justification in order to reach an agreement. This section focuses on the aspects of the justification theory that are invoked and employed in the analysis of Chapter 6.

2.1.1 Regimes of action

Boltanski (Basaure, 2011, pp. 363-364) has indicated that social actions can be divided into four different regimes of action based on two distinctions or criteria to assess the situation of analysis (see Figure 2.1). The first distinction is about whether there is a situation of conflict. Situations of conflict are characterized by any form of disagreement between people, e.g. a lawsuit or war. Actions taken in these situations are assigned to regimes of conflict. In contrast to this, there are also situations without any disputes i.e., the peace regimes. The second criterion to classify a situation is based on equivalences. Equivalences make it possible to calculate or account for what is happening in a situation (Basaure, 2011). For example, in a driving test, the driving skills of a person are evaluated, or in a running competition, the participants are ranked on their performance. Equivalences allow for comparing actions (e.g. various driving tests) between people and assign a value or worth to individual actions. Boltanski makes a distinction between situations in which equivalences do play an important role (equivalences activated) and those in which they do not (equivalences deactivated). Situations in which equivalences play an important role are characterized by a comparison between actions, objects or people based on one
or more criteria. If persons involved in a particular situation have deactivated equivalences, calculations or comparisons become difficult or impossible (e.g. in a situation of love). In relationships of love, the people involved do not compare or calculate what they give and receive from each other (Jacquemain, 2008, p. 3).

Figure 2.1: The four regimes of action.

Regimes of conflict in which equivalences play an important role (in situations of conflict) may be termed as regimes of justice. A lawsuit is an example of a regime of justice because (pre-determined) equivalences (e.g. in the form of a Penal Code) can be used to create a compromise for the conflict. The second type of regime of conflict, in which equivalences are not important, have been termed regime of violence. These regimes are characterized by physical or symbolic violence. Regimes of violence arise when there is “no proportionality rule that limits the use of strength” (Jacquemain, 2008, p. 4). A proportionality rule could determine the accepted level of violence based on equivalences (e.g. a violent arrest could be justified for a resisting, dangerous suspect). Boltanski (Basaure, 2011, p. 363) states that if violence in a conflict is asserted by itself, equivalences do not play a role anymore and are deactivated.
On the basis of presence/absence of equivalences, peace regimes may be classified as regimes of routine, the ones in which equivalences play an important role, and as regimes of love, in which equivalences do not play a role (e.g. as in the previous discussed relationship of love example).

People can shift between the different regimes of action, for instance, from the regime of routine to the regime of justice. After a traffic accident, the two involved drivers may be in a conflict about who is guilty. Before the accident the drivers were both driving around and did comply with the traffic rules (regime of routine), however, the accident made both of them assess and justify their actions before and during the accident differently (resulting in a regime of justice). A shift between two regimes is always preceded or initiated by a particular event (e.g. a traffic accident or a court judgment) which solves or causes a conflict and/or which activates or deactivates equivalences. A more elaborate discussion of shifting between action regimes is provided in section 2.1.7.

2.1.2 Orders of worth

The justification theory (Boltanski & Thévenot, 1999) is based on actions in the regime of justice, characterized by situations of dispute in which equivalences play an important role. Social actions taken in this regime need to be justifiable. “It is in particular in situations of dispute that a need arises to explicate the grounds on which responsibility for errors is distributed and on which new agreement can be reached” (Boltanski & Thévenot, 1999, p. 359). In order to explicate this ground and reach a new agreement between the involved people it is necessary that the social actions taken in these situations are justifiable. Justifications need to be based on an underlying principle of equivalence (Boltanski & Thévenot, 1999, p. 363). For example, the market principle emphasizes that the demand and supply of a particular scarce good should determine its value. Based on the market principle two people should be able to reach an agreement about the sale of a house without favoring anyone. A principle of equivalence is required to reach a level of generality between the involved people and to legitimize the justifications made.

Boltanski and Thévenot (1999) developed six principles of equivalence to categorize the various modes of justification. These six orders of worth or common worlds are: (a) the world of inspiration, (b) the domestic world, (c) the world of opinion, (d) the civic world, (e) the market world, and (f) the industrial world. Each world, developed through extensive research of traditional political philosophical literature by Boltanski and Thévenot (1999; 2006), has a specific underlying logic or principle of order. A particular social action (e.g. the sale of a valuable family heirloom) in the market world can be justified by the market principle (high demand for the heirloom will ensure a high profit), while the same social action could be refuted by considering another principle, e.g. the domestic principle
(the heirloom is an important expression of the family history and should never be sold or handed over to someone outside the family).

2.1.3 Qualification of objects, events and persons

In order to come up with a proper justification one needs to establish engagements with objects, events and/or persons related to the situation. The engaged objects, events and persons are used to offer proof for the justifications made. In each of the six worlds, different forms of proofs (i.e. different objects, events and people) are considered legitimate to support a justification. In order to support a justification objects, events and persons need to be qualified according to a particular world (Thévenot, Moody, & Lafaye, 2000, p. 237). In the qualification process, entities of an argument are put to the ‘test’. “A test in this sense is a creative and dynamic process of demonstrating what is relevant in a particular situation (and de-emphasizing or ignoring what is not relevant), and attributing worth to the relevant entities” (Thévenot, Moody, & Lafaye, 2000, p. 267). The relevant entities can be objects, events or people in a particular situation related to one of the six worlds. For example, a teacher could be a qualified person in the industrial world and a newspaper article about a particular celebrity could be a qualified object in the world of opinion. In a discussion about the fame of the celebrity worth could be attributed to the newspaper article to support a justification belonging to the world of opinion.

Objects, events or qualities can also be ambiguous; meaning that they can be derived from different worlds depending on how they are understood. For instance, the terms ‘authority’ and ‘responsibility’, can both be used to qualify the relation between a father and his children in the domestic world, but also for the relation between a supervisor and his subordinates in the industrial world (Boltanski & Thévenot, 2006, pp. 279-280). This could also account for objects; a mobile phone can be qualified as a device to maintain contact between family members in the domestic world, although the same kind of mobile phone can be considered as an indispensable device for conducting financial transactions on a stock market. In the latter situation the mobile phone is qualified as relevant to the market world. Therefore, the same object can sometimes be qualified as relevant in distinct worlds, depending on the situation. Similarly, people can possess or acquire particular skills or characteristics that are considered worthy only in particular worlds. Engineering skills are considered to be worthy in the industrial world, while creativity and ingenuity are valuable characteristics in the world of inspiration.

2.1.4 Reality tests

In contrast with the earlier mentioned ‘test’, the reality test is not about qualification of objects and entities, but about the assessment of the justifications made. By running a reality test, the involved actors assess which arguments are considered the worthiest in one world in order to reach a grounded and
legitimate agreement. The involved actors should try to keep the reality tests as pure as possible. This means that the involved actors should adhere to the same world and only include objects, people and events that are relevant and qualified in that particular world. When a reality test becomes less pure, (i.e. qualified objects from other worlds are brought in) it will also become easier to denounce the test (Boltanski & Thévenot, 1999, p. 374). Each world has a number of criteria which constitute the variables for a reality test; the kind of test, the mode of evaluation, the relevant form of proof needed to assess and evaluate the worth, and the types of objects and human beings involved in the associated worlds (as explained in the previous section). The kind of test designates what kind of variable(s) should be used to conduct a reality test in a particular world. The mode of evaluation denotes the characteristics of worth in a particular world. Finally, the relevant form of proof indicates the relevant format in which information should be provided in order to support a justification in a particular world (see Table 2.1) (Thévenot, Moody, & Lafaye, 2000, p. 237). For example, a reality test in the domestic world uses trustworthiness as a variable to assign worth to a person, object or event. The degree of worth is measured by esteem and reputation as modes of evaluation. Finally, the relevant form of proof for a test in the domestic world should be provided in an oral, exemplary or anecdotal format.

Table 2.1: The six worlds and the criteria comprising a reality test, adapted from (Thévenot, Moody, & Lafaye, 2000).

<table>
<thead>
<tr>
<th>World of inspiration</th>
<th>Domestic world</th>
<th>World of opinion</th>
<th>Civic World</th>
<th>Market world</th>
<th>Industrial World</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test</strong></td>
<td>Passion, enthusiasm</td>
<td>Trustworthiness</td>
<td>Popularity, audience, recognition</td>
<td>Equality and solidarity</td>
<td>Market competitiveness</td>
</tr>
<tr>
<td><strong>Mode of evaluation</strong></td>
<td><strong>(worth)</strong></td>
<td>Esteem, reputation</td>
<td>Renown, fame</td>
<td>Collective interest/welfare</td>
<td>Price, cost</td>
</tr>
<tr>
<td><strong>Form of relevant proof</strong></td>
<td>Emotional involvement &amp; expression</td>
<td>Oral, exemplary, anecdotal</td>
<td>Semiotic</td>
<td>Formal, official</td>
<td>Monetary</td>
</tr>
<tr>
<td><strong>Qualified objects</strong></td>
<td>Emotionally invested body or item</td>
<td>Heritage, locale</td>
<td>Signs, media</td>
<td>Regulations, fundamental rights, welfare policies</td>
<td>Freely circulating market good or service</td>
</tr>
<tr>
<td><strong>Qualified human beings/skills</strong></td>
<td>Creativity, ingenuity</td>
<td>Authority</td>
<td>Celebrity</td>
<td>Equal citizens, solidarity unions</td>
<td>Customer, merchant, seller</td>
</tr>
</tbody>
</table>
Objects, people, and events belonging to a particular world (e.g. customers, buyers, and transactions in the market world) and discursive arguments provide the details for assessing the strength of justifications in a particular world (Patriotta, Gond, & Schultz, 2011, p. 1809). To illustrate this I will use again the example of the heirloom. One of the last scions of a noble family is drowning in debts and decides to sell the family’s ancient heirloom to repay his debts. The scion argues according to the market world, that it is permissible to sell the heirloom because it will muster the money that he needs to repay his debts. The relevant objects and persons in this argument, the valuable heirloom, the seller, and the potential buyer, give strength to this argument in the market world. Offering the heirloom for sale could be a reality test, if the scion can find someone who wants to buy the ancient heirloom for a good price, his argument to sell the heirloom would be justified in the market world.

2.1.5 The six worlds

World of inspiration
The world of inspiration is based on the attainment of a state of grace, can be evoked by emotions and inspiration from a person’s body, and can be expressed in creativity, imagination or authenticity (Boltanski & Thévenot, 1999, p. 370). One of the characteristics of this world is that people do not let their actions be easily influenced by opinions of other people. Justifications made in the world of inspiration are supported by emotional involvement or are overwhelming in some other (spiritual) sense (Thévenot, Moody, & Lafaye, 2000, p. 252).

Domestic world
The domestic world depends on a hierarchical order based on a chain of personal interdependencies expressed by esteem and reputation. These interdependencies can be family ties, a certain position in a lineage or ties to a locality. In order to understand and evaluate someone’s worth (i.e. trustworthiness and authority) in the domestic world, you need to understand the person’s position in the network of dependencies from which the person draws his or her authority (Boltanski & Thévenot, 1999, p. 370).

World of opinion
In the world of opinion, worth is solely dependent on the opinions and recognition of other people. Public esteem, popularity and recognition are the drivers in this world and define the worth of someone regardless his or her many personal interdependencies or his or her self-esteem. Celebrities, well-known personalities and opinion leaders are relevant and worthy persons in the world of opinion (Boltanski & Thévenot, 1999, p. 371).
**Civic world**

In the civic world, only the collective will and welfare count, people have to put their personal goals and aspirations aside for the common good. Collective welfare is defined by means of a complex process of information exchange and mobilization; meetings, discussions and debates; and democratic procedures (e.g. a voting) (Boltanski & Thévenot, 2006, pp. 192-193). By diminishing the value of the individual, the civic world clearly opposes both the domestic world and the world of opinion. The personal interdependencies of the domestic world and public esteem and recognition of the world of opinion are considered worthless in the civic world. The worth of justifications in the civic world is evaluated by its level of solidarity and equality in the relevant space (e.g. village, cooperative or community). Welfare policies, fundamental rights and regulations are objects that could be qualified to support legitimizations from the civic world. People are considered relevant and worthy in the civic world as they belong to a group or as they represent a collective (e.g. a union leader) (Boltanski & Thévenot, 1999, p. 372).

**Market world**

The market world is argued to be driven by the market principles of economics established in Wealth of Nations (1776) by Adam Smith (Boltanski & Thévenot, 1999, p. 372). Arguments are based on the desire of people to possess the same scarce goods, resulting in a competition for scarce goods on a market coordinated by demand and supply (Jagd, 2011, p. 346). The competitiveness of markets and short-term monetary profitability define the worth of justifications made in the market world. Important human beings in the market world are the consumer, the customer, the merchant and the seller (Boltanski & Thévenot, 1999, p. 372).

**Industrial world**

The industrial world is the world of productivity, professional capacities and efficiency. In this world, worth is explicitly measured by means of criteria and statistics associated with productivity, efficiency, planning and long-term investments. Technological objects, infrastructures, projects and scientific methods are the objects that can be qualified in order to support justifications in the industrial world (Boltanski & Thévenot, 1999, pp. 372-373; Thévenot, Moody, & Lafaye, 2000, pp. 243-244).

Although Boltanski and Thévenot (1999) developed initially only these six worlds, both scholars have independently expanded the initial framework. Thévenot, Moody and Lafaye (2000) introduced the green world,⁴ while Boltanski and Chiapello (2005) introduced the project-oriented world.⁵ These ‘new’ worlds

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⁴ The green world, developed by Thévenot and Lafaye (2000) is related to the principles of environmental friendliness, sustainability and non-polluting. Arguments from this order defend actions to protect the wilderness, the stewardship of environmental resources or the recycling of scarce natural resources (Thévenot, Moody, & Lafaye, 2000).
are designed for specific and local situations, for instance, a case with environmental issues at stake or complex alterations within large organizations. For purposes of the present research, both of these ‘new’ worlds are not relevant and thus not delved into.

2.1.6 The compromise

Persons involved in a dispute apply distinct and often conflicting modes of justification originating from different worlds. For example, arguments from the world of opinion emphasize the importance of popularity and recognition from other people, while the opinions and recognition of other people may be condemned in an argument from the world of inspiration. Thus, people can only fruitfully discuss and come to an agreement in a situation of dispute when they use justification logics belonging to the same world. Arguments and justifications from one world cannot be displaced to another world because it would create a lack of equivalence. Objects, persons and events brought together to support a justification need a “common definition in the form of a generality” (Boltanski & Thévenot, 1999, p. 361) making it possible to establish a principle of equivalence. As already noted, a principle of equivalence ensures that the people involved in a situation of dispute converge towards a common definition of the relevant arguments, objects, persons and events in a particular situation. The assessment of a school exam should be based on the skills and understanding of subject demonstrated by the student, not on his or her appearance or friendliness.

When a situation contains objects from multiple worlds (i.e. a composite situation), it becomes difficult to conduct a reality test. As already noted, in order to come to an agreement for the dispute it is necessary to conduct a reality test in a situation as pure as possible (i.e. only arguments, objects, events and persons from one world). However, when more worlds are assumed relevant in a situation, the reality test will lose its credibility and it will be easier to reject its outcome. When the core principle of equivalence applicable in a situation is called into question, the dispute transforms into a rivalry between two or more reality tests each based on its own specific world. The actors involved must shift to one single world (and reality test) in order to come to a grounded agreement and solve the dispute. If shifting to one world appears impossible for the involved actors, a compromise between the adhered worlds would be necessary. In a compromise, the involved actors refer to a higher-level principle on which objects and actions from the different worlds could be based. This higher-level principle is an aggregation of two distinct worlds into one new world. ‘Workers’ rights’ is an example of an aggregated or composite higher-level principle due to its reference to the civic world (were the citizens have rights) and the industrial world (where the

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5 The project-oriented world is about forming networks in organizations and making use of the furthest and most remote ties. In the project-oriented world everything is about being in action, moving from one project to the next. (Boltanski & Chiapello, 2005).
workers are relevant and worthy) (Boltanski & Thévenot, 2006, pp. 277-279). Due to the incorporation of justifications and objects from different worlds, a compromise is considered a weak device.

Although the six different worlds have distinct logics that are often incompatible, it is also possible that a particular composite situation is unproblematic. These unproblematic composite situations generally do not take place in the regime of justice, but in the regime of routine. In the regime of routine, social actions are characterized by an important role for equivalences and there is no dispute. Therefore, in a particular composite situation, multiple worlds may be invoked which are not in opposition (there is also no dispute). For example, an artist who has made a new sculpture could justify this action in both the world of inspiration (i.e. the artist experienced a lot of creativity and inspiration) and the market world (i.e. the artist needed to earn money for his/her living). The two invoked worlds make this a composite situation in the regime of routine because the two worlds are not in opposition (they are not in conflict).

However, bringing together arguments from different worlds in the regime of justice (which is characterized by a dispute) demands the establishment of a solid and deliberated compromise, which could be strengthened by materializing the compromise. The materialization could be done by creating new institutions or objects made of things relevant within the associated worlds. These new objects are often specifically designed to support the new higher-level principle (Boltanski & Thévenot, 1999, pp. 374-375). A ‘minimum wage’ is an example of such a new designed object only relevant to the ‘workers rights’ higher-level principle, which is a compromise between the civic world and the industrial world. Especially ambiguous objects are considered useful for materializing a compromise because an ambiguous object could be qualified in multiple (opposing) worlds. Nevertheless, the ambiguous object still needs a new meaning relevant to the higher-level principle in order to support the compromise. For example, the ‘wage’ could be considered as an ambiguous object; in the civic world a wage is qualified as a way to ensure that all people earn enough money for a decent living; in the industrial world a wage could be qualified as a way to reward certain skills and competences of an employee. Therefore, the same object, the wage, has a different meaning in the two opposing worlds. This object is qualified with a new meaning for the new higher-level principle of ‘workers rights’. The object becomes the ‘minimum wage’, which supports the higher-level principle of ‘workers rights’.

Objects used to materialize a compromise can be denoted as stabilizing objects or obligatory objects of reference. Obligatory objects of reference can stabilize situations and prevent potential disputes because the engaged objects act as a compulsory reference for the involved people. The timetable of a train for instance, creates a certain implicit uncontested equivalence between people (Basaure, 2011, pp. 363-364). Rail passengers on a rural route demand a high frequency of trains, while the train operator does not want
provide an unlimited number of trains on the rural route. While the rail passengers argue in the civic world that public transportation should be available for all people regardless of their remote location. The train operator would argue from the market world that it would be financially impossible to employ a high frequency train on the route. The dispute could be solved by a compromise between the civic and the market worlds in a predetermined number of trains on the route. The compromise will be supported by an obligatory object of reference, the time table of the train. This object ensures that the rail passenger know when and how many trains to expect and at the same time the train operator is obligated to provide trains at the pre-determined intervals.

After the formation of a compromise supported by several stabilizing objects, the situation is (provisionally) displaced from the regime of justice to the regime of routine due to the avoiding of a dispute. The new situation is still a composite situation, but it is not characterized anymore by a conflict. Boltanski (Basaure, 2011, p. 363) emphasizes that ideas of Latour (1991) about objects connecting people, play an important role in the process of shifting from the regime of justice to the regime of routine. Objects could be used to assess different justifications in a reality test (pure situation) or to support a compromise (composite situation) as an obligatory object of reference.

2.1.7 Shifting between regimes of action
As indicated in section 2.1.1, one could define four regimes of action. Situations of dispute, characteristic for the regimes of justice (and violence), can be solved by either reaching an agreement after conducting a reality test or establishing a compromise in a composite situation. By solving a dispute, the involved people and situations will provisionally shift to the regime of routine, referred to as situations without disputes in which equivalences are still considered important. By successfully reaching an agreement or establishing a compromise, the involved actors have solved the conflict while keeping the importance of equivalences in place. However, a conflict in the regime of justice could also be solved by shifting towards the regime of love. In this regime one could put his or her reference to equivalences aside and solve the dispute by forgiving. This action of forgetting and forgiving is possible due to the discarding of equivalences (Boltanski & Thévenot, 1999, p. 375; Basaure, 2011, p. 365).

2.2 Research method
For this research, both qualitative and quantitative research methods have been applied to identify the opinions and ideas of the brickmakers in the Lubuk Alung area. The population for this research is geographically delineated by the borders of Lubuk Alung regency. Available information indicated a
population between 200 and 300 brickmakers in Lubuk Alung regency; however, due to the lack of accurate and reliable information estimates are inexact. Several semi-structured interviews with brickmakers and key-informants, a survey (N=32), two group discussions and several (participatory) ethnographic observations were carried out to obtain the quantitative and qualitative insights, which were required to construct the narratives on the barriers, opportunities, and justifications for the building of a brickmakers’ cooperative in Lubuk Alung regency. Pseudonyms are used in this report to protect the identities and privacy of the involved persons.

2.3.1 Interviews
One important part of the fieldwork consisted of a number of interviews conducted with the various involved actors, for instance, brickmakers, government officials, and former cooperative board members. The interviews were semi-structured with closed and open-ended questions covering various subjects relevant to the interviewee (e.g. for brickmakers: the brickmakers’ interests, the production process or the encountered problems of the brickmaker). Each interview was prepared by making an initial list of subjects and/or questions that could be interesting to ask for the planned interviewee. Due to the exploratory character of this research, further important actors were identified during the research and consequently interviewed.

2.3.2 Questionnaire
As part of this research, a questionnaire was conducted to obtain quantitative information about the brickmakers in Lubuk Alung regency (see Appendix II). The gathering of quantitative information was necessary to provide a representative image of the preferences, needs and expectations of the brickmakers in Lubuk Alung regency regarding the building of a brickmakers’ cooperative. The sample comprised 10 to 15% of the total population of brickmakers in Lubuk Alung, eventually 32 brickmakers were surveyed. The quantitative questionnaire was developed following several initial exploratory field visits and was then pilot tested by three brickmakers and subsequently revised. The survey consisted of four parts: the first part investigated the characteristics of the business and participants (e.g. capacity and number of the kiln(s), years of experience); this part also includes the questions why local brickmakers would or would not join a future brickmakers’ cooperative. The second and third part of the survey examined how the brickmakers perceived the barriers and opportunities for building a cooperative. The final part determined whether and how the brickmakers consider a future cooperative as a means to increase their disaster resilience.

6 Ade (Village Leader Pasia Laweh), interview, Pasir Putih, January 31, 2013; Utami (government representative of the regional Department of Industry), interview, Pariaman, February 26, 2013).
**Sample selection**

The brickmakers included for the survey were randomly selected by first determining the (estimated) total number of brickmakers in the target area and defining the specific places (or sub-areas) where brickmakers were concentrated. In each sub-area were subsequently five to 10 brickmakers selected and approached for participation in the research. The lack of proper (street level) maps and accurate information about the number of brickmakers and their locations within Lubuk Alung regency made it difficult to set up a proper sampling method. Even the local staff members of Build Change Indonesia did not exactly know the number of brickmakers in the area and their locations. Nevertheless, the participants were all randomly selected by means of systemic sampling. This sampling method was based on the selection of each third brickmaker along a road or path used to enter a sub-area. It took us five days to survey the 32 brickmakers who were included in the survey. Each (half-day) session was started in a different sub-area of Lubuk Alung regency. The lack of a detailed map with the boundaries of Lubuk Alung and adjacent regencies complicated the selection method even more. Due to the lack of clear boundaries, it was often not clear in which regency we were. Therefore, before a selected participant could be questioned, his or her residence in Lubuk Alung regency had to be ensured.

The majority of the sample (N=32) was male (18 persons), but we also conducted six questionnaires with women and eight interviews with both the man and woman who were in charge of the brick-making business. The average time in business for the brickmakers is about 11 years, although almost half of the questioned brickmakers are only in business for six years or less. The reason for the high proportion of brickmakers with only three to six years of experience is probably the result of the high influx of new brickmakers after the 2007 and 2009 earthquakes in this region (Build Change Indonesia, November 2012). Three of the interviewed brickmakers were already operating their business for 30 or even 40 years (see Figure 2.2). Although 32 brickmakers participated in the survey, two cases were discarded from the eventual sample. The two excluded brickmakers indicated in the end of the interview that they actually did not really understand what a cooperative is. These two cases also emphasized the importance of providing a clear definition of a brickmakers’ cooperative before conducting the survey.
2.3.3 Focus group meetings

In the last month of the research two focus group meetings were conducted. The focus group meetings were held with approximately three to five brickmakers and were aimed at gathering different (individual) ideas and opinions about how the building process of a brickmakers’ cooperative should look like. Another important topic was the question on how a cooperative could increase the disaster resilience of the brickmakers in Lubuk Alung regency. All participants for the focus group meetings were selected from the already interviewed or surveyed brickmakers. This gave the advantage that I could easily make a selection of brickmakers based on pre-captured properties and these brickmakers were already introduced to and provided with the definition of a brickmakers’ cooperative during earlier held surveys or interviews. Initially I arranged two group discussion meetings. The first focus group discussion with three large brickmakers (i.e. brickmakers who own more than three brick kilns were considered to be large) who also had some cooperative experience (e.g. in the former brickmakers’ cooperative in Lubuk Alung or with a cooperative in another area). The second focus group meeting was arranged for a group of small brickmakers who were borrowing money from a local moneylender (identified during the earlier held survey). With this grouping, I tried to compose two opposite groups; one group of brickmakers who had a certain degree of power and influence in Lubuk Alung regency and a second group consisting of
brickmakers with less power and capital at their disposal, who may even have been strongly dependent on their local moneylender due to unpaid debts.

Unfortunately, nobody from the second group, the small brickmakers who were borrowing money from a local moneylender, did come to the arranged place. On the same day, I had also invited the group of large brickmakers with cooperative experience and they did show up. One possible explanation for the absence of the small brickmakers may be that they could not afford it to spend their valuable time somewhere else than in their brick-making businesses. The meeting was planned on a Monday morning, so not in their spare time. Finally I arranged a third focus group meeting for small brickmakers (without taking into account whether these brickmakers borrowed money from a local moneylender). This time we asked five brickmakers, who were closely situated to each other, on a Friday morning whether they wanted to participate in a group discussion held in the afternoon (after the Friday prayers). Fortunately, this second attempt resulted in a successful focus group discussion with all invited brickmakers. Eventually, I did not have the intended contrast as initially planned, although there was still a considerable difference in the degree of power and influence between the brickmakers from the first and the third focus group meeting.

**2.3.4 Ethnographic observations**

To gain a better understanding of the brickmakers’ practices, their interests and their encountered problems I also conducted ethnographic observations (Gray, 2004). The observations were both participant and non-participant. During the numerous visits (i.e. for interviews and questionnaires) to the various brickmakers, I made many non-participant observations. Although these visits were primarily meant for conducting interviews or questionnaires, I was often able to take some pictures, or to observe (ongoing) activities in the brick-making businesses and ask questions to the people working in the brickyards.

However, in order to get a better feeling and understanding of the brick-making practices, the living conditions and the problems encountered by the brickmakers, I participated and worked for one week in one of the brick-making enterprises. During this week, I tried to participate in the various activities and operations part of the brick-making process in order to gain a thorough understanding of the brick-making process. Even though I wanted to know more about ideas, experiences and narratives behind certain practices or encountered problems, these insights were very difficult to obtain for me due to the language barrier. I could speak only a few words in the local language (Bahasa Minang) and my host family did not speak English at all. However, the neighboring shopkeeper did speak a little bit English and was often willing to facilitate the communication between the brick-making family and me. During the six days of my stay, I was mostly participating and working in the brickyard, e.g. by shaping bricks, mixing sand and
clay or loading and unloading trucks of bricks or firewood. I kept an extensive log about all experiences and observations by means of notes and pictures.

2.3.5 Ethics and dependencies

One of the most important characteristics of a researcher is impartiality. This means that a researcher should realize “that research necessarily involves making political and ethical choices about which voices are heard and whose knowledge counts” (Goodhand, 2000, p. 12). I tried to maintain a certain level of impartiality by including different kinds of brickmakers (poor and rich, small and large, men and women, young and old) in the sample of my research.

Another important characteristic of a researcher is independence. A researcher should strive to prevent situations in which he or she is (too) dependent on a person or organization. Unfortunately, this is often not completely possible (e.g. researchers are often dependent on a financial supporter, which has to approve the research proposal before financing the research). Collaboration with a NGO could also lead to a situation of dependence. The organization could be very valuable for the researcher because the NGO can provide access in the field, have a lot of (local) experience and knowledge, and useful facilities (e.g. transportation or translator) in the research area (Mercer, 2006). However, being too much associated with the collaborating NGO could reduce the impartiality of the researcher and could even affect the answers of respondents (e.g. respondents do not want to share their critical opinion because it would be in conflict with the affiliated NGOs stance) (Mercer, 2006).

The research I conducted was done in collaboration with the non-profit social enterprise Build Change. The collaboration was initiated by a request from me to fulfill my graduation research in collaboration with Build Change Indonesia (BCI). The program manager of BCI offered me the possibility to conduct a research related to the building of a brickmakers’ cooperative in Lubuk Alung regency. My research would be part of the just initiated Better Building Materials (BBM) project. The aim of the BBM project was to improve the quality of bricks to an acceptable earthquake resistant standard by improving the brick manufacturing practices, by investigating and addressing the social-economic drivers of poor brick production, the environmental impacts of brick production and removing the many technological barriers found in the brick producing family enterprises in the Lubuk-Alung area (Build Change Indonesia, February 2013). During my application Build Change suggested that the building of a brickmakers’ cooperative would be the main strategy to address the identified problems among the poor brick quality. However, this initial suggested direction of the Better Building Materials project changed considerably in the course of my stay (discussed in the next section).
Dependence on the BBM project

During my stay in Indonesia, my dependence on my host organization Build Change increased with the changing circumstances of the BBM project. Build Change provided me with all preconditions necessary for conducting my research. The NGO provided me with accommodation, a translator/research assistant and transportation in and towards the field. Meanwhile, I received a lot of freedom in formulating my research questions and objectives. Until the second month of my research the organization allowed me to choose my own path, but when I was approaching the third, and last month, of my stay in Indonesia the circumstances around the BBM project changed considerable. The BBM project was fully launched at that moment and all employees in the Padang office were needed to implement the project activities. As a result, the program manager of BCI announced at that moment, one month before finishing my fieldwork, that it would be the last week for me to use the translator and Build Change’s transportation. Unfortunately, I was not (yet) finished with the planned interviews and focus groups for my research. However, after a discussion, the program manager allowed me to use the translator and transportation for one or two more days in the last three weeks and he offered the possibility of using the translator and transportation during the weekends at my own expense. From being very independent during the onset of my research, I became very dependent on my host organization in the last part of my research. The increased pressure on the BBM project resulted in a decreased priority for my research due to my subordinate contribution to the BBM project (i.e. my research was not crucial for the success of this project). This was mainly the result of a changed project approach in which the building of a cooperative was not part of the project anymore (see section 5.2). Unfortunately, the changed availability of translator and transportation meant a restriction on the amount of data collected.

Dependence on translator

Build Change Indonesia provided me with a translator in order to communicate with the Bahasa Minang and Bahasa Indonesia speaking brickmakers and other stakeholders and to assist me with the research (e.g. for making appointments). The translator had a bachelor degree in civil engineering, but his English was basic, which hampered the translation process sometimes. In the field, each time we visited a brickmaker I introduced myself as a (student) researcher from a Dutch university. However, my knowledge of the local language (Bahasa Minang) was not sufficient to take the lead. Therefore, I had to pass the word on to my translator. He subsequently explained that he was from Build Change Indonesia and that he would assist me with translating the interviews. He also provided a short explanation about the BBM project Build Change Indonesia was going to implement in the area. Although I tried to keep control over the interviews by asking the questions first in English, this appeared sometimes very difficult. The translator had difficulties in providing the appropriate translations and he did not always
understand my questions, which resulted (especially in the beginning) in some time consuming discussions between the translator and me during the interviews. This has limited me (to a certain extent) in understanding and grasping all information the respondents gave and it could have led to missing valuable information. I tried to prevent the missing of valuable on-topic information by informing the translator as well as possible about my (research) questions and aims beforehand.

After several interviews, I noticed that the interviewees gave each time the same answer with the same explanation. I thought this was quite remarkable and then I asked the translator what he thought what the right answer would be. The answer of my translator matched completely with the answers that the respondents gave each time. Probably the translator influenced the answers of the interviewees. However, the translator could have influenced the respondents unnoticed, for example by clarifying a question in a particular way or by giving a preferential answer as an example. This ‘improvising’ of answers could have resulted in some biased results. The translator may have tried to assist the interviewees by ‘thinking’ for them and consequently coming with an answer ‘what the respondent actually meant’. This was a recurring issue during the fieldwork, although I repeatedly explained to the translator that I was solely interested in pure translations of the exact words said.

**Expectations**

The provided transportation, access, translator and accommodation by Build Change made me part of the Build Change organization and the BBM project. The interviewees were also very curious about the Build Change’s project activities and planning regarding the building of a cooperative. My research assistant replied to the many interested people that BCI was doing an initial investigation about the possibilities of building a cooperative. He always explained that it was not sure yet whether Build Change would rebuild a brickmakers’ cooperative in the area. The unclear status and objectives of the BBM project evoked the danger of creating false expectations among the brickmakers. My research was clearly aimed at investigating how the brickmakers would build a cooperative. Therefore, by doing this research in collaboration with Build Change Indonesia I already created the expectation that BCI would build a brickmakers’ cooperative. In order to prevent such false expectations Goodhand (2000) suggests that the purpose of the research should be explained clearly and consistently to all participants at all stages of the research process. Besides that, the researcher should work in close cooperation with the NGO to ensure that findings are closely tied to subsequent actions (Goodhand, 2000).

However, almost half of the surveyed people asked or mentioned after interview that they really want a cooperative in this area. One day we were approached by an unknown woman, while we were driving through the area. The woman appealed to us that she really wanted a cooperative and that Build Change
had to build one. This example illustrates that we (the translator and I) had created the expectation that Build Change would build a cooperative by posing questions about the building of a brickmakers’ cooperative to various brickmakers. However, the BBM project changed its course during the research period (January – April 2013) considerably, with the consequence that the building of a brickmakers’ cooperative became eventually a subordinate objective of the BBM project. The BBM project was during its onset completely focused on the building of a cooperative to solve the problems of the brickmakers and the poor brick quality. However, eventually the focus of the BBM project was changed into a set of investigations, in which the building of a (pilot) cooperative was denoted as a minor element of the whole project. So the research I was doing became eventually more or less disconnected from the Build Change project. The changing and vague BBM project objectives made the interviewing of brickmakers about how to build a brickmakers’ cooperative a bit controversial. Due to the not very clear aims and shifting objectives of the BBM project, it was not always clear for the translator and me what we had to inform exactly to the brickmakers about the Build Change’s plans regarding the building of a cooperative.

During one of the last days of my stay in Indonesia, I made a small document for all the brickmakers who participated in the research with an overview of the research results. Together with my translator, I visited all involved actors and distributed the document. The document explained (in Bahasa Minang) that I was finished with my research and provided a summary of the research results, a short description about the next steps of the Better Building Materials project of Build Change and contact details for more information.
3. Literature review

The majority of the literature written about cooperatives in developing countries covers the functioning and potential impacts of cooperatives (e.g. the potential of cooperatives for poverty reduction (Simmons & Birchall, 2008)). The process of uniting potential cooperative members and the building of cooperatives is in general less discussed in the literature. Nevertheless, this chapter provides an overview of the existing literature about potential barriers and opportunities, which could be found in the process of building a cooperative in developing countries. The chapter starts with a general description of ‘the cooperative’ in the first section. The second section provides a brief overview of (the emergence of) cooperatives in developing countries. In particular, the history of cooperatives in Indonesia is discussed in this section to provide a better understanding of the cooperative movement in Indonesia. The third and fourth sections discuss, respectively, the possible opportunities in the process of building a cooperative, and the possible barriers, encountered in the existing literature about small-scale producer cooperatives in developing countries.

3.1 What is a cooperative?

According to the organization representing all cooperatives worldwide, the International Cooperative Alliance (ICA), a cooperative is “an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise” (International Co-operative Alliance, 2012). Members of a cooperative can be persons, but also businesses or ‘legal persons’ (e.g. organizations which have members themselves). A cooperative is owned by the members themselves, independently of the government or anyone else (e.g. a NGO or company). The members can voluntarily join or withdraw their membership of the cooperative. Each member has one vote regardless of his or her contribution to the cooperative (e.g. contribution in terms of stored savings in the cooperative or in the effort involved in holding a board position) or the size of his or her business. So in a cooperative comprised of a variety of businesses, the owners of both the smallest and the largest businesses have only one vote. A cooperative is designed to meet the members’ needs defined by the members themselves (Birchall, 2003).

Together with the above mentioned definition, the ICA (2012) provides seven cooperative principles (see Box 3.1). “The first four of these are core principles without which a cooperative would lose its identity; they guarantee the conditions under which members own, control and benefit from the cooperative. The education principle is really a commitment to make membership effective and so is a precondition for democratic control, while cooperation among cooperatives is really a business strategy without which cooperatives remain economically vulnerable. The last principle, concern for community, is about
corporate responsibility, and it leads into other concerns that the ICA is promoting such as prevention of poverty and protection of the environment” (Committee for the Promotion and Advancement of Cooperatives, 2008, p. 2). The first four principles should always be pursued in the daily affairs of the cooperative and the articles to guarantee full control by the members. The last three principles are invoked by the ICA to strengthen the cooperative identity and to ensure benefit for a community (e.g. a village or a cluster of brickmakers’) with the establishment of a cooperative.

Box 3.1 The seven guideline principles for cooperatives, adopted from (International Co-operative Alliance, 2012).

The seven cooperative principles:
1. Voluntary and Open Membership
2. Democratic member control
3. Member Economic Participation
4. Autonomy and independence
5. Education, training and information
6. Co-operation among co-operatives
7. Concern for community

Cooperatives can be classified along a number of different criteria (e.g. economic status or according to the number of functions). The classification based on the economic status of the members makes a division into three groups: producers, consumers, and laborers. A brickmakers’ cooperative should be classified as a producers’ cooperative. Producers’ cooperatives can be further classified by means of their economic functions, (a) supply cooperatives (for the procurement of goods and resources), (b) marketing cooperatives (for the sale of end products), (c) processing cooperatives (e.g. a farmer cooperative which processes the milk of its affiliated farmers), and (d) service cooperatives (e.g. a credit cooperative). If a cooperative has only one economic function or task it can be denoted as a single-purpose cooperative, or a single commodity cooperative (for the marketing of one product), cooperatives with more functions are denoted as multi-purpose cooperatives (Van Dooren, 1978, p. 56). Besides these kinds of cooperatives, there are many different kinds of cooperatives with a variety of functions irrelevant for this research (e.g. housing cooperatives, for the provision of affordable housing for a large group of people, or medical cooperatives, for the spreading of high health care costs).

It is important to emphasize that cooperatives should be seen as social enterprises that certainly can and should make profit. Cooperatives are too often erroneously seen as part of the ‘non-profit’ sector (Simmons & Birchall, 2008). A cooperative tries, just like a business, to make a profit. The major
distinction between a business and a cooperative is that a cooperative divides its profit among its members and hence supports a group of people instead of only one business owner or a small group of shareholders.

3.2 Producers’ cooperatives in developing countries

The emergence of cooperatives in many developing countries (including Indonesia) has often been initiated and led by governments. Historically, in general, people have not united themselves spontaneously into cooperatives. In Western Europe, the (agricultural) cooperative building process in the mid-19th century was initiated by wealthy notables or clergymen who for example felt sorry for poor farmers (Van Dooren, 1978, p. 39). The Western European governments did not interfere in the cooperatives and disassociated themselves from the cooperatives.

Cooperatives in Indonesia

The first cooperatives in Indonesia were set up by the Dutch colonizers at the end of the 19th century. After the proclamation of independence of the Republic of Indonesia (1945), cooperatives were given a prominent role in the development of the Republic of Indonesia. Cooperatives were considered to bring economic growth and necessary for rebuilding of the country after hundreds of years of colonization. The nationalist government emphasized the importance of cooperatives as a way forward to modernize the traditional economies (Simmons & Birchall, 2008, p. 2132). Especially ‘Bapak Koperasi’ (Father of Cooperatives), Mohammed Hatta (1902-1980), was seen as Indonesia’s most famous advocate of cooperatives. Hatta, vice-president of the Republic of Indonesia from 1945 until 1956, was also the lead author of Article 33 of the 1945 constitution. This article dictates that the “the economy shall be organized as a cooperative endeavor based on the principle of family life” (Republic of Indonesia, 1945). Hatta even envisaged that “one day the whole nation would become a commonwealth of cooperatives” (Henley & Boomgaard, 2009, p. 15). Unfortunately, the government retained a lot of influence in the cooperatives, with the result that the public considered most cooperatives as semi-public organizations. The members were not able to control their own cooperatives and hence did not have the feeling that the cooperative belonged to them. However, the structural adjustment programs from the World Bank and IMF from the late 1980s resulted in major reforms for many government-backed cooperatives and the collapse of a large number of cooperatives (Simmons & Birchall, 2008, p. 2132). Despite the developments of the structural adjustment programs, there are still officially sponsored cooperative sectors in Indonesia that are largely government or party controlled (Simmons & Birchall, 2008, p. 2135).
3.3 Opportunities for building a producers’ cooperative

The process of building a small-scale producers cooperative creates a number of potential opportunities for the stakeholders. This section elaborates on a number of opportunities for building a cooperative discussed in the available literature about small-scale producer cooperatives in developing countries.

3.3.1 Poverty alleviation

A number of scholars (Hulme & Montgomery, 1994; Birchall, 2003) have advocated that cooperatives could be useful for the alleviation of poverty. Birchall (2003, p. iii) concluded in his study that the self-organization of the poor is an important pre-condition for successful poverty reduction in which the cooperative form of organization could play an important role. “The poor must be involved in ownership of the development process, through their own local, democratically controlled economic organizations. If the cooperative form did not exist, it would have to be invented” (Birchall, 2003, p. x). There is some agreement among scholars that cooperatives have a potential for poverty reduction of the poor (Simmons & Birchall, 2008). A cooperative could assist in several ways to address poverty among its members.

Increasing market power

Although cooperatives are not considered as ‘productive tools’ that can directly alleviate poverty, they can be “a means by which groups of people could gain economic advantages that individually they could not achieve” (Birchall, 2003, p. 7). A cooperative could be very effective to empower its members by accumulating the market power of all members. The members, especially small producers or consumers, on their own may have little or no market power, but once united the members become a big, more powerful entity on the market. With increased market power, the members could increase their profits and this could even provide ways out of poverty in particular circumstances (Committee for the Promotion and Advancement of Cooperatives, 2008).

Microfinance

A cooperative could act as a microfinance institution (MFI) by providing loans to the members who are in desperate need for capital. The capital necessary for these loans could be accumulated by other members’ stored savings or the cooperative could associate with an external party (e.g. NGO or government), which willing to provide funding for microfinance purposes. Microfinance institutions have a number of characteristics in common which make them very advantageous for the poor and vulnerable people who cannot get access to formal and modern financial institutions (e.g. a commercial bank) (Christen, Rosenberg, & Jayadeva, 2004). First, microfinance is quick and flexible; people can easily access loans and credit without the need to provide collateral and repayment methods are flexible. Secondly, microfinance is localized and proximate to people. Especially in developing countries, people in rural
areas often do not have access to transportation, emphasizing the importance of microfinance in the close vicinity. The third important characteristic of MFIs is their ability to create and strengthen a social network in the community (Husein, 2004). These advantages apply also for microfinance organized by cooperatives.

**Displacement of middlemen**

The former two ways of addressing the issues of poverty could also have an additional positive impact on poor cooperative members who borrow money from moneylenders. Rural small-scale producers or farmers are often restricted to the services of a local moneylender in order to obtain a loan. Financial institutions cannot provide loans because the producers or farmers do not have adequate collateral, and a comprehensive solvency assessment would cost too much time and effort for a financial institution for the limited revenues of a small loan (Bonus, 1986, p. 318). However, local moneylenders are often in the right position to gather and evaluate information about the solvency of a small-scale producer. The moneylenders have a good understanding of the various people in a community (e.g. his or her residing village) and by maintaining a good relation with the people who are in need for a loan they are able to assess the solvency of these people (Bonus, 1986). The intensive jobs of gathering local information of the people allow the moneylenders to charge high interests for their loans.

Rahim (1957) writes about the poor farmers in 1950’s of Indonesia who need to borrow money from moneylenders in periods of adversity (e.g. a flood or crop failure). The farmers receive credit from the money lenders in cash, but they need to repay their debts after harvesting in kind. Due to the high interest demanded by the moneylenders, the farmers have to transfer a significant proportion of their harvest to the moneylenders. In the end, the poor farmer has only a small part of his harvest left for himself, worsening his economic position. Due to the high interest rates of the moneylenders, the peasants become “the victims of the moneylenders who eventually own their crops and thus become the ‘cancer of the people’” (Rahim, 1957, p. xvii). The small-scale producers who are borrowing money (like the farmers in the example of Rahim) become entangled in a trap of debts to their moneylenders. A cooperative could liberate these ‘captured’ small-scale producers by offering affordable loans and possibly increase the income of the cooperative members by means of elevated market power (by means of a collective marketing of end products). The advantage for a cooperative is that the inside knowledge necessary to assess whether someone is eligible for a loan is available in the cooperative itself. Cooperative members are willing to share inside knowledge about their solvency because they trust their own cooperative. If the small-scale producers were confronted with an outside financial institution, they would be far more reluctant to disclose sensitive local information (Bonus, 1986, p. 319).
3.3.2 Creation of social capital

The building of a cooperative could create (new) forms of social capital for its members. Social capital is “a resource that actors derive from specific social structures and then use to pursue their interests; it is created by changes in the relationship among actors” (Baker, 1990, p. 619). Social capital can be divided in three categories depending on the situation. First, bonding capital, which connects people in similar situations (e.g. friends, colleagues or family). Secondly, bridging capital, which links people with the same status at a large geographic or social distance. The third kind is linking capital, which implies connecting people with dissimilar status or in different situations (i.e. vertical integration, e.g. creating a link between a poor entrepreneur and a government official) (Amarasinghe & Bavinck, 2011, p. 387). The process of building a producers’ cooperative could result in the creation of social capital in two forms, bonding capital and linking capital. By setting up and improving collaborations with fellow producers, bonding capital is created among the members. Linking capital is created by means of new vertical connections (i.e. people with a different social or economic status) established between cooperative members and supporting or collaborating stakeholders (e.g. between a small-scale producer and a government official or the local village leader). Especially linking capital can provide entry points for improving the vulnerability of cooperative members. Amarasinghe & Bavinck (2011, p. 402) have investigated in their paper a number of fishery cooperatives in Sri Lanka which all had established linkages with external organizations (e.g. local government) to invoke support in times of adversity (e.g. a flooding). This kind of social linking capital can be very effective and valuable for cooperative members who encounter problems hard to resolve by themselves.

3.3.3 NGOs and cooperative development

In their pursuits to improve the living conditions of the poor and vulnerable people in developing countries, developing NGOs often try to apply a participatory approach in their development projects. Participatory development is aimed at the incorporation and engagement of the local target population in a development project in order to make the projects sustainable after finishing the project. Such a participatory development project could also entail assisting a group of producers’ to build a cooperative. Cooperative development and participatory development share a number of similar underlying principles (Simmons & Birchall, 2008). Both approaches are aimed at empowering the target population and create an involvement and control over the projects aimed at improving their own living circumstances and livelihoods. The advantages of cooperative development are that cooperatives seem to be quite suitable in preserving common pool resources such as an important access road or collective irrigation channels and the cooperatives are likely to continue their activities after NGOs have finished their projects once the development funding is spent (i.e. the projects are sustainable) (Simmons & Birchall, 2008, p. 2134).
makes cooperative development a very suitable strategy for development NGOs in their pursuits of empowering or supporting a particular industry or village.

### 3.4 Barriers for building a producers’ cooperative

In the process of building a small-scale producers’ cooperative in developing countries a number of barriers could be encountered. This section provides an overview of the various potential barriers discussed in the literature about small-scale producer cooperatives in developing countries.

#### 3.4.1 Government interference

Sandee et al. (2002) investigated how various small and medium enterprise (SME) clusters in Indonesia evolved over time. The case studies indicated that in most investigated clusters, the government has attempted to organize the small producers through cooperatives. These cooperatives could enhance the competitive position of the clustered producers by collective resource procurement, sharing assets and equipment and collective marketing. However, the research also indicated that the government-initiated top-down implementation of cooperatives proved to be unsuccessful and most of these cooperatives have been disbanded (Sandee, Isdijoso, & Sulandjari, 2002). Sandee et al. (2002) mentioned two reasons for the failure of most government initiated cooperatives. The first reason is the lack of ownership; members of these cooperatives do not feel responsible for maintaining the cooperative’s facilities. In most cases, the government did not succeed in activating the self-organizational potential of a cooperative or cluster. Due to government interference, cooperative members did never get the chance to exercise full control over the cooperative. Secondly, leading firms and buyers are often not included in the establishment of these government-led cooperatives (Sandee, Isdijoso, & Sulandjari, 2002). The leading firms are possibly excluded because the firms are seen as the major competitors of the small, less successful firms. The establishment of a cooperative could enable the smaller firms to compete with the leading firms. However, in particular the leading firms and buyers (in a specific sector) play a significant role in the process of developing a cluster. These firms or buyers predominantly manage the existing successful networks between producers or buyers. By neglecting these actors, a lot of important knowledge and support is lacking in the process of developing a cluster of small-scale producers (Sandee, Isdijoso, & Sulandjari, 2002).

The problem of excessive government interference in the cooperative sector indicated by Sandee et al. (2002) has been the reason that the ILO drafted some recommendations for the role of governments regarding their cooperative sector: “ILO Recommendation No. 193 emphasizes the need to promote the business potential of cooperatives, allowing cooperatives to make a contribution in the sustainable development and decent employment. It does not advocate the complete withdrawal of governments, but
recommends an institutional framework in which the government registers cooperatives as simply and efficiently as possible, regulates them in the same way as other forms of enterprises, and provides a wide range of support such as human resource development, access to credit, and support services for marketing, all without infringing the cooperative autonomy” (International Labour Organization, 2002). Under the pressure of the structural adjustment programs of the World Bank and the recommendations of the ILO, cooperatives in developing countries have achieved more autonomy by legal and macro-economic reforms (Simmons & Birchall, 2008, p. 2138). Cooperative autonomy should be safeguarded by ensuring that a cooperative is established and functions as a member-owned social enterprise. “Internally this means they should be driven by the needs and priorities of members, who have joined voluntarily and made a real commitment. Externally, this means they are seen by other agencies as self-reliant, autonomous organizations. It follows that they should mobilize local resources, rather than relying on grants or subsidies from outside” (Birchall, 2003). Although Birchall (2003) argues that cooperatives should prefer mobilizing their own local resources, funds or subsidies from external actors (e.g. government institutions or NGOs) could be very effective for the strengthening of organizational systems and personnel. However, these outside funds or subsidies should not be used to increase the volume of goods or services provided by the cooperative (Hulme & Montgomery, 1994, p. 378).

**Top-down approach**

Pathak and Kumar (2008) have investigated which key factors contribute to successful performance of cooperatives in Fiji. One of the main reasons for failing cooperatives identified by this research is that cooperatives were promoted/designed by governments and development agencies (i.e. top-down approach) instead of originating in the ideas of the future members (i.e. bottom-up approach). In Fiji, the cooperative idea was thrust upon the people by the government without proper guidance and education about the cooperative principles and appropriate management tools required for the building and maintaining of a cooperative (Pathak & Kumar, 2008, p. 701). Although the top-down approach is considered to be more vulnerable for failure (e.g. due to excessive government interference) (Huppi & Feder, 1990; Pathak & Kumar, 2008), a top-down approach for the building of a cooperative should not be ruled out *a priori*. In the case of a top-down approach, it is however necessary that the implementing organization (i.e. government or development agency) informs and educates the people about cooperative principles and concepts. The education and guidance of people could result in the adoption and adaptation of the cooperative idea and hence the internalization of the process of building a cooperative. Besides that, the cooperative board should be trained in management skills and practices in order to create a successful and sustainable cooperative (Pathak & Kumar, 2008, p. 701). Such a process has the potential of converting a top-down approach into a bottom-up approach.
3.4.2 Misusing the legal form of a cooperative

In 2006, the German Technical Cooperation (GTZ) had together with the Indonesian Central Bank setup a microfinance program in the aftermath of the December 2005 tsunami in the Indonesian province of Aceh (Budi Utama, 2006). Part of the program was the promotion and boosting of a new cooperative credit sector. Due to the strong influence of the Islam in the society of Aceh, an Islamic credit scheme was setup. One of the barriers encountered during the implementation of the GTZ program was the lack of trust in the cooperatives among the people in Aceh. The GTZ indicated that in previous years a number of people in Aceh had set up a cooperative in order to get legal/formal status for their businesses. For them it would be easier to obtain a legal status by establishing a cooperative than the conventional way of establishing a limited company in Indonesia. These wrong reasons to establish a cooperative resulted in a lack of compliance to the cooperative principles and eventually the destruction of these established cooperatives (Budi Utama, 2006).

Another wrong reason to establish a cooperative is to obtain funds. Although, once the funds are acquired the cooperative becomes deactivated unless a new fund or a new program with funds is announced. The financial assistance of donors (government or NGOs) could work counterproductive because the cooperatives lose their autonomy. The cooperative would only act as a tool to obtain (government) funds without addressing the real needs of the members. Government programs aimed at providing funding in order to boost the establishment of cooperatives could attract free riders and irresponsible persons (Budi Utama, 2006).

3.5 Conclusions

This chapter gave an elaborate discussion of the cooperative idea, the seven cooperative principles developed by the ICA and the development of cooperatives in the developing world (with emphasis on cooperatives in Indonesia). The penultimate section of this chapter elaborated on the potentially encountered opportunities in the process of building a small-scale producers’ cooperative in some selected developing countries. The existing literature emphasized the opportunity of poverty reduction for a cooperative. Poverty reduction could be achieved by three identified opportunities for the cooperative members (a) increasing market power, (b) offering microfinance and (c) the displacement of local moneylenders. These three opportunities fostered by a cooperative could improve the situation of the poor cooperative members. A second opportunity is the creation of social capital. In the process of building a cooperative, various stakeholders have to work with each other to make the cooperative work. This process of building the cooperative creates social capital for the stakeholders. Due to the intensified collaboration with fellow small-scale producers, the members increase their social bonding capital and the vertical collaborations (e.g. collaboration between a producer and a government representative) enlarge
the linking social capital of the cooperative members. The third identified opportunity is related to development agencies or NGOs. The incorporation of the building of a cooperative in the development projects of NGOs could increase local participation rates in the projects. A properly-built cooperative is also very likely to continue after the withdrawal of the development NGO, which would make the projects of the development NGO more sustainable.

The final section of the chapter provided an overview of possible barriers encountered in the process of building a small-scale producers’ cooperative. Two potential barriers for the process of building a producers’ cooperative were encountered in the literature. An extensive discussed barrier is the potential interference of external parties in the process of building a cooperative. In particular, government interference is considered detrimental for the sustainability of cooperatives. Especially in the past, many cooperatives in developing countries, such as Indonesia, were initiated and built by governments. In most cases, government representatives maintained their influence in the cooperatives in order to control large numbers of businesses. The stringent government interference prevented the creation of a cooperative identity and feeling of ownership among the members. Another identified barrier is the misuse of cooperatives. Small entrepreneurs in Aceh, Indonesia used the legal form of a cooperative for their business because a cooperative license proved to easier to obtain than a license for a limited company.

Although this chapter gave an elaborate discussion of the various potential opportunities and barriers in the process of building a small-scale producers’ cooperative in a developing country, the literature is less concerned with the actual process of making cooperatives. The existing literature is primary focused on the functioning and potential impacts of cooperatives. This thesis, by studying the process of building a cooperative with a description of the various stakeholders, their perspectives, justifications and the establishment of compromises, thus makes an important contribution to the literature on cooperatives.
4. **Brick-making in Lubuk Alung**

This chapter delves into the brickmakers’ businesses and the various practices associated with the process of making ‘traditional’ clay bricks. It is largely based on the participatory observations of the researcher and a number of interviews with brickmakers in the area. A number of questions from the survey are used in this chapter to provide some figures of the brick-making businesses in the Lubuk Alung regency (e.g. average number of kilns per brickmaker). The first section provides a detailed description of the brick-making businesses and the brickmakers’ economic lives in the Lubuk Alung regency. Followed by a section about the entire process of making clay bricks in six sequential steps.

4.1 **The brickmakers in Lubuk Alung**

A large number of brickmakers are living in the rural areas of the Lubuk Alung regency in the Padang-Pariaman district because the area is well-stocked with clay and sand, the two essential resources for making clay bricks. The businesses of the brickmakers are often family-owned, which generally also means that the whole family is working in the business with support of a few additional laborers. The next subsections provide a detailed picture of the businesses of the brickmakers and the financial situation of the brickmakers.

4.1.1 **The brick-making business**

Everything in a brick-making business revolves around the brick kiln. The brick kiln is a kind of open hut in which the sundried un-fired bricks are stacked on a pile covering about 10 m$^2$ and a height up to three meters. Under the pile, a fire is burned for a couple of days to glaze small sand particles in the clay and to harden the bricks. The majority of the surveyed brickmakers (more than 80%) indicated that they use only one kiln in their small, brick-making business (see Table 4.1). Various field observations have demonstrated that the vast majority of the brickmakers in Lubuk Alung regency make use of ‘traditional’ production technologies, which implies the use of wood fired open-air updraft kilns and production practices largely based on manual labor without the use of machines. This way of making bricks is characteristic for the Lubuk Alung regency and handed down from parents to children for generations. The production capacity of the small-scale businesses is limited by the size of the brick kiln and the number of employees. The brick kilns can have different sizes depending on the capacity of the kiln to contain bricks in a single firing. The capacity of a brick kiln varies between 15,000 and 60,000 bricks, although the average kiln contains about 30,000 bricks per firing (see Figure 4.1). The brickmakers fire their kiln on average every six weeks, so the annual

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7 Tika (brickmaker), interview, Pasir Putih, January 24, 2013
production capacity of a brick-making business is on average 250,000 bricks. The ‘traditional’ small-scale businesses of the brickmakers in the Lubuk Alung area are not suitable for expansion to large-scale brick manufacturing plants. However, if the brickmakers are able to set up a partnership among multiple brickmakers and to attract sufficient capital (from investors, government or associated actors from the brick industry), a large continuous fired kiln could be built in the area. This large kiln would replace between the 16 and 32 brick-making businesses.\(^8\) Currently the brickmakers in Lubuk Alung expand their businesses only by building additional wood-fired updraft kilns. The brickmakers do not make major changes in the design of the new kilns, but they do incorporate small improvements when they build an additional (or replacement) kiln. Brickmaker Zeze lost his kiln during an earthquake and explained that he dug his new kiln half a meter into the ground to make the replacement kiln more earthquake resistant.\(^9\)

The large brick manufacturers in this area own up to seven kilns.\(^10\)

Table 4.1 Number of kilns per surveyed brickmaker (or brick-making business).

<table>
<thead>
<tr>
<th>How much kilns do you use?</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kiln</td>
<td>26</td>
<td>81%</td>
</tr>
<tr>
<td>2 kilns</td>
<td>4</td>
<td>13%</td>
</tr>
<tr>
<td>3 kilns</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>4 kilns</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100%</td>
</tr>
</tbody>
</table>

\(^8\) Large continuous fired brick kilns in India or Bangladesh have production capacities of 4,000,000 up to 8,000,000 bricks per year (Gomes & Hossain, 2003; Shakti Sustainable Energy Foundation, 2012).

\(^9\) Zeze (brickmaker), interview, Singguling, March 6, 2013

\(^10\) Sumitro (large brickmaker and leader of village cooperative KUD III), interview, Pasir Putih, January 31, 2013.
Most brick-making businesses are located on a small plot of land (i.e. a brickyard) where all activities of the brick-making process are carried out. The brickyards are in general situated on a plot of land with an approximate size of 1000 m². Each brickyard consists of a brick kiln, a mixing pit (for the blending of sand and clay) and several drying beds (for the drying of shaped bricks in the sun). Most brickmakers do also have access to clay and sand resources from the small hills on their plot of land. The vast majority (81.3%) of the surveyed brickmakers responded that they have to rent their plot of land (see Table 4.2). The rent for a plot of land (i.e. the brickyard) is on average 1000 bricks per firing process. Each time the brickmaker has finished a batch of bricks he or she has to hand over 1000 bricks to the owner of the land. The brickyards are scattered through the rural landscape and clustered together in the areas with small hills that contain the necessary resources (i.e. sand and clay). The brickyards are partly located in the

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1 Amatt (brickmaker), interview, Pasia Laweh, February 11, 2013.
outskirts of villages, and partly in the remote areas outside the villages between the rice fields. The majority of the brickmakers do not live in their brickyards, but in one of the small villages in the area. However, during the fieldwork a few brickmakers were observed who had built a small residential shack in their brickyard.

Table 4.2 Brickyard rented or owned by the surveyed brickmakers.

<table>
<thead>
<tr>
<th>Do you rent the land for your business?</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>26</td>
<td>81%</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>16%</td>
</tr>
<tr>
<td>On loan from family</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The number of laborers working in a brickyard is variable and dependent on the size of the kiln and the length of the production cycle. A brickmaker who produces one batch of bricks every four weeks needs more additional labor than a brickmaker who is also working in his or her brickyard but only produces one batch per eight weeks. However, the entire production process for one kiln is in general executed by four to five workers. The division is often two people for the shaping of bricks, one person (buffalo handler) for the mixing process and one person for the firing of the kiln. The owner of the business is often involved with the supervision of the process and the stacking of the bricks in the kiln for the firing. Although brick-making is a fulltime job, some of the successful, larger brickmakers have developed their businesses in such a way that they only occasionally need to supervise their employees. These large brickmakers have multiple kilns and enough employees for all activities in the brickyard without the necessity to work in the brickyards for themselves. A small brickmaker could not afford it to hire an employee as a replacement for himself. The large brick-making entrepreneurs have often also other (fulltime) jobs such as school teacher, village leader or restaurant/shop owner.

The small brick-making businesses are often family-owned in which the whole family contributes. Both men and women are working in the brick-making process, although the man is often responsible for the management tasks, such as supervision of the laborers, the procurement of resources, and the marketing of the finished bricks. The digging and mixing of sand and clay, and the arrangement of the bricks in the kiln is often done by the men, while the women usually shape the bricks. The shaping of bricks, just like the mixing of the sand and clay, is a heavy job. The children of the brickmakers often assist with small easy jobs like carrying bricks. Brickmaker Riri told that her seven years old son is often doing small jobs in her business because he likes to work in the brickyard and she approves it as long as his activities do
not disturb his education.\textsuperscript{12} In a number of other brickyards, (young) children were encountered working in the brick-making process. The parents of the children mentioned that the children were allowed to do some small jobs after school for a little pocket money.\textsuperscript{13}

\textbf{4.1.2 Financial situation}

A significant proportion of the brickmakers face difficulties in finding sufficient working capital. The brickmakers only acquire capital after they have sold their finished bricks. However, the production cycle of one batch of bricks takes on average six weeks. The brickmakers make about Rp. 50-100 (approximately € 0.004 - € 0.008) profit per brick, so they can earn about Rp. 2,250,000 (or € 180) per production cycle with an average production capacity of 30,000 bricks.\textsuperscript{14} The rural poverty line for the province of West Sumatra is determined at Rp. 273,655 per capita per month (Central Agency of Statistics - Indonesia, September 2012). The poverty line statistic is determined by a complex formula that calculates the average costs for a healthy daily food intake of 2,100 calories and a number of essential non-food items, including housing, health care and clothing (The Economist, 2011). The revenues of most brick-making businesses are required to maintain a family of two adults and a number of children. The average household income of a general brick-making family is Rp. 1,500,000 per month, which is well above the provincial determined rural poverty line. The average income of the brickmakers in Lubuk Alung is also amply above Indonesia’s national poverty line of Rp. 200,262 (The World Bank, 2013). However, the brickmakers are always dependent on the weather (i.e. during rainy days it is impossible to dry the bricks) for the pace of their production process and the market value of their bricks, so their revenues can vary significantly.

After selling their bricks, the brickmakers have to save sufficient money to cover expenditures, necessary for the next production cycle and for their livelihood, until a new batch of finished bricks can be sold. This period is sometimes prolonged when the brick demand is low and the brickmakers have to wait for better selling opportunities. Unfortunately, not all brickmakers have built up enough buffer capital to wait for better offers and have to sell their bricks against unfavorable low prices. Especially the long production cycles in the wet season put the brickmakers in financial problems; Riri indicated that her earnings are 50\% lower during the wet season.\textsuperscript{15} In the wet season, from September until February, it takes much more time to dry the bricks and the process is often shutdown or postponed due to heavy rainfall. The reduced brick production capacity during the rainy season results in a reduced supply, which

\textsuperscript{12} Riri (brickmaker), interview, Singgulian, March 6, 2013.

\textsuperscript{13} Angga (brickmaker), interview, Jalan Lingkar, January 24, 2013.

\textsuperscript{14} Agung (brickmaker), interview, Pasir Putih, January 24, 2013; Amatt, February 11, 2013; Batara (brickmaker), interview, Jalan Lingkar, February 11, 2013.

\textsuperscript{15} Riri, March 6, 2013.
causes a price increase for bricks in the rainy season. The wealthier brickmakers and brick vendors try to anticipate on these higher brick prices by stockpiling bricks during the dry season, which they can sell consequently for higher prices during periods of low brick supply in the wet season.\(^{16}\)

Besides the wet season, there is another difficult period for the brickmakers. Just before, during and after Ramadan (the Muslim holy month of fasting), the demand for bricks is very low and sometimes even stagnated because most builders do not work during the Ramadan period. The celebrations following the Ramadan, the Eid al-Fitr celebrations, mean an expensive period for all Muslims. Eid-al-Fitr is a big family celebration and often seen as a new start. To emphasize the new start, people often buy new clothes, a motorbike or something else they might need and desire.\(^{17}\) In this period, it is also expected from everyone, who can afford, to donate to poor people. The brickmakers are also in a need of money in the preparations for these celebrations and often have to sell their bricks in this period of high supply, but low demand. All brickmakers try to finish and sell a last batch of bricks just before the celebrations, however, the contractors do not need the bricks because their building projects are mostly suspended in the Ramadan period. Due to the low demand, brickmakers sometime have to sell their bricks below cost price.\(^{18}\) Another difficulty develops twice a year when the brickmakers have to pay school fees for their school-going children. Due to the long and uneven production cycles of the brick-making businesses, it is difficult to assure enough money for large expenditures such as school fees.\(^{19}\)

The working capital available to the brickmakers is considerable after they have sold a batch of finished bricks. However, from that moment with passing time, their working capital is shrinking. The irregular earnings of the brickmakers result in periods of affluence and periods of poverty, depending on the time (and money) spent after their last brick sale. In the affluent periods directly after the sale of the bricks, some brickmakers tend to buy expensive goods such as a new television, or a motorbike.\(^{20}\) However, according to brickmaker Sumitro, it would be wiser to save money for future investments and expansions of their brick-making businesses. Sumitro is both a brick-making entrepreneur and the full-time leader of the multipurpose village cooperative KUD III in one of the small villages of Lubuk Alung regency. He started more than ten years ago with saving the profits he made with his single kiln in order to expand his business in the long run. Currently Sumitro is a successful brick-making entrepreneur with 16 employees

\(^{16}\) Triago (leader of village cooperative KUD II), interview, Lubuk Alung, January 31, 2013.
\(^{17}\) Andre (research assistant Build Change), personal communication, Padang, March 30, 2013.
\(^{18}\) Sumitro, January 31, 2013.
\(^{19}\) Sukmo, Daksa and Yuli (brickmakers), focus group discussion, Singguliang, March 29, 2013.
and he has expanded his brick-making business to a number of seven kilns with only savings from his brick-making business.\textsuperscript{21}

### 4.2 How are the bricks made?

Brick-making consist of a number of successive steps that have to be followed in order to run through the process of making a clay brick (a scheme of the successive steps can be found in Figure 4.2). The process starts with obtaining the necessary resources, then these resources need to be mixed, shaped into bricks, dried in the sun and finally fired in the kiln. The following sections elaborate each stage of the brick-making process in more detail. The steps described in this section are mainly based on participatory observations during the six days that the researcher spent working together with brickmaker Agung and his family.

![Figure 4.2: Scheme with the successive steps in the process of making bricks.](image)

#### 4.2.1 Mixing the raw materials

Three natural resources; pure clay, sand and water, are required for the production of red clay bricks. Most brickmakers source clay and sand from the hillside slopes on their brickyards and mix these two resources together into a coherent mixture. During the mixing process, the fluidity of the mixture is increased by adding rainwater from water ponds in the brickyard. The brickmakers make use of different kinds of ratios between the clay and sand quantities. There is no standard mixing ratio because the quality and composition of the sand and clay in each location is different. Brickmaker Candra indicated that he uses one part sand for each part of clay,\textsuperscript{22} though brickmaker Fendy said that he uses three parts of sand for each part of clay.\textsuperscript{23} The difference in composition of the used sand and clay is not the only reason for the different mixing ratios. Brickmaker Agung for instance, said that the best clay/sand ratio to work with is 1:2, although he often increases the quantity of sand to a 1:3 ratio to reduce costs because sand is cheaper than clay.\textsuperscript{24} Small twigs, rocks or roots are sometimes found in the clay or sand and often end up in the mixture and consequently in the bricks. The organic rubble creates inconsistencies in the mixture,

\textsuperscript{21} Sumitro, January 31, 2013.
\textsuperscript{22} Candra (brickmaker), interviewed by BCI, Pasir Putih, October 9, 2012.
\textsuperscript{23} Fendy (brickmaker), interviewed by BCI, Jalan Lingkar, January 9, 2013.
\textsuperscript{24} Agung (brickmaker), interview, Pasir Putih, April 5, 2013.
while the small rocks and pebbles create holes and cracks in the outside of the bricks. Fired bricks made with an inconsistent mixture or containing holes and cracks lose some of their strength.  

Most brickmakers own or rent a plot of land containing small hills, from which they can excavate large quantities of sand and clay for the production of bricks (see Figure 4.3a). However, the resources on a plot of land are finite. Dependent on the size of the plot, brickmakers have to move after a number of years to another plot to assure sufficient resources. Not all brickmakers move to a new brickyard with abundant resources. Brickmaker Agung for instance, does not have access to resources on his plot, but he procures the required sand and clay for the production of his bricks. These procured resources are dug from a large pit located nearby the brickmakers on a spot with abundant quantities of pure sand and clay (see Figure 4.3b). The sand and clay is dug and coarsely mixed with large excavators and transported to the brickyards (without access to sand or clay) by means of small trucks. The sand from this area is not only used by brickmakers; a large part of the sand dug away from the pits in this area have been used for the building of the International Airport of Padang in 2001 and is still being used by the Padang Cement factory in Padang.  

The conventional way for the brickmakers to mix sand and clay is by means of a buffalo in an open mixing pit, with a size dependent on the amount of mixture needed. The mixing pit is a circular pit with a diameter of about four meters and a depth of approximately half a meter. The sand and clay is first coarsely mixed with a shovel and then one or two buffalos will do the real mixing (see Figure 4.4). The buffalos are urged by a handler to walk around in the pit for an hour to mix and squeeze the sand and clay

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25 Agung, interview, Pasir Putih, April 3, 2013  
into one coherent mixture. After one hour of buffalo mixing, the mixture has to be dug over and repositioned towards the center of the pit by shovel again. Then the buffalo has to walk around again for a final half an hour. The vast majority of the brickmakers hire a buffalo for the mixing of their sand and clay. However, (only) one brickmaker (Agung) encountered during the fieldwork in the area was also using a mixing machine. The mixing machine consists of a petrol engine that drives two counter-rotating rollers, which blend and squeeze the sand and clay mixture (see Figure 4.5). The operator of the machine has to enter continuous scoops of sand and clay into the input funnel, then the scoops of sand and clay are mixed and squeezed through the rollers in the machine and are consequently pressed out of the machine as a coherent mixture through a funnel by means of a rotating propeller shaft.

Figure 4.4: Pictures of a mixing pit with (a) a buffalo mixing the sand and clay and (b) digging the mixture by hand.

Figure 4.5: Pictures of (a) the mixing machine, (b) the input funnel and (c) the output of the machine.
Most brickmakers do not want to use the mixing machine because the machine would accelerate the brick-making process too much. Brickmaker Candra explained that a mixing machine produces within an hour too large a quantity of the mixture, which must be processed on the same day resulting in overtime for the workers.27 This appears to be a misunderstanding of the operation of the mixing machine: during my participant observations, I did operate the mixing machine and it was no problem to make just a small quantity of mixture. However, a large portion of the local brickmakers do not use a mixing machine because they feel that the use of mixing machine would be too expensive for them.28 Nevertheless, according to the brickmaker who uses the mixing machine, Agung, hiring a mixing machine is half the price of hiring the services of a buffalo and its handler.29 At least one brickmaker, Sumitro, also felt that it is impossible to use a mixing machine in Lubuk Alung because the machine was only suitable for mixing clay, while the local brickmakers also used sand in the bricks, which (according to Sumitro) may damage the machine.30

4.2.2 Shaping and drying the bricks

The shaping of the bricks is done manually by smashing three big lumps of the sand and clay mixture into a wooden mold suitable for the molding of six bricks in one time. Then the excess clay on top of the mold is separated from the mixture in the mold with a wire saw and dropped on the ground by rotating the wooden mold 90 degrees. The molds are subsequently carried to the drying beds, turned upside-down and emptied on the ground (see Figure 4.6). The just shaped bricks are very malleable until they are sundried for one to four days. The drying time is dependent on the weather and the sun, and can be much longer with frequent rain. The shaping of the bricks is often done by women who produce about 1500-2000 bricks per person per day. The brick molders earn Rp. 35-40 per brick, so on average they earn about Rp. 60,000-80,000 per day.31

27 Candra, interview, Pasir Putih, January 24, 2013.
28 Amatt, February 11, 2013; Riri, March 6, 2013.
29 Agung, January 24, 2013.
31 Agung, January 24, 2013.
Although shaping machines are used in the brick-making industries of other areas in Indonesia (District government of Tanah Bumbu, 2013), the brickmakers in Lubuk Alung regency shape all their bricks by hand using the wooden molds. Agung mentioned that he did not use the shaping machine because there is less local demand for mechanically shaped bricks. The surfaces of these bricks become very smooth which makes the bricklaying and plastering more difficult for the builders.\textsuperscript{32}

\textbf{Weather and seasonal influences}
West Sumatra has a wet and a dry season; the wet season generally starts in September and continues until January/February. West Sumatra receives a substantial amount of 4766 mm precipitation per year on average (Climate & Temperature Indonesia; Padang, Sumatra, 2012). Brickmakers often cannot work in the wet season due to heavy rainfall, and even worse is that the just molded bricks cannot dry during rainy days. Due to these problems, the brick-making process is often hampered and slowed down during the wet season. However, these problems are not limited to the wet season; during the time of research (January-April 2013) it was raining far more often than usually in the dry season.\textsuperscript{33} Due to these often unexpected rain showers, the brickmakers encounter many unforeseen delays and have to protect their unfired bricks each evening with plastic sheets.

\textbf{4.2.3 Brick piling in the kiln}
After being dried for one to three weeks the bricks are stacked in the open-air kiln. All brickmakers in the area make use of the same kind of wood-fired updraft kilns. An updraft kiln is comprised of a square area

\textsuperscript{32} Agung, interviewed by BCI, Pasir Putih, October 9, 2012.
\textsuperscript{33} Agung, April 3, 2013.
enclosed by a 50 cm wide, one meter high brick wall with a roof made of palm leaves at a height of 3-4 meters above the ground (see Figure 4.7c). The enclosed area varies between 9 m² and 25 m², dependent of the required capacity. The bricks are stacked in these enclosed areas into one massive pile of unfired, dried bricks up to three meters high (see Figure 4.7b). A network of small crevices and small flues made in the pile of bricks distributes the heat through the whole pile of bricks. The small crevices between the stacked bricks on the outer layer of the pile are covered with two or three layers of differently stacked bricks and mud to keep the heat inside the pile of bricks (see Figure 4.8c). The enclosed brick wall of the kiln itself has three arched openings of approximately 80 cm high and 50 cm wide in the front and the rear wall of the kiln. These openings on the bottom of the pile of bricks form three tunnels through the whole pile (see Figure 4.8a). The firing process is carried out in these tunnels at the bottom of the kiln (see Figure 4.8b). Oxygen can enter through the firing tunnels, the smoke and heat can eventually escape through the crevices on the top layer of the brick pile.

Figure 4.7: Pictures of (a) the piling of bricks in a kiln (b) a kiln (without roof) filled with finished bricks and (c) a large empty brick kiln with a capacity of 60,000 bricks.

4.2.4 Firing the kiln

The process of firing the kiln takes non-stop four to five days. The fire starts small and is increased slowly until a zenith, which is reached on the third day. The fire is subsequently tempered slowly in the following two days. During the firing process, one person has to watch and control the fire continuously
during the whole firing process. The brickmakers face often difficulties in maintaining the right temperatures in their kiln due to the variety in quality and types of wood supplied by the wood vendors.\textsuperscript{34}

![Figure 4.8: Pictures of (a) the tunnel on the bottom of brick kiln (b) a tunnel during the firing process (c) the two outside layers of bricks stacked differently to keep the heat in the kiln.]

**Firewood**

The brick kilns are fueled with wood. During the four or five days of the firing process the brickmakers need two truckloads (approximately 35 m\(^3\)) of wood for reaching and maintaining the necessary temperatures for the firing process in the kiln. One truckload of wood costs between Rp. 1 and Rp. 1.4 million depending on the type and quality of the wood.\textsuperscript{35} The wood vendors buy different kinds of woods from various suppliers, for instance, the residuals from a palm tree sawmill, laban trees from private land or the unproductive trees from rubber or rambutan plantations. The brickmakers preferably use the dark, hard wood from the rainforests for firing their kiln because this wood burns hotter and longer than the other woods (i.e. black wood has a higher heating value).\textsuperscript{36} The preferred black, hard wood grows very slowly and can only be found in ancient (rain) forests. The wood vendors emphasize that they do not sell wood which has been cut illegally, however, it is not clear whether this is also really the case.\textsuperscript{37} Although the wood prices were quite stable in January-April 2013, after the 2009 earthquake the demand for bricks skyrocketed and so did the prices of wood because not only the brickmakers needed wood for their kilns, there was also a big demand for construction wood.\textsuperscript{38}

\textsuperscript{34} Batara, February 11, 2013; Riri, February 11, 2013.
\textsuperscript{35} Candra, October 9, 2012.
\textsuperscript{36} Batara, February 11, 2013; Dian (brickmaker), interview, Pasir Putih, January 24, 2013.
\textsuperscript{37} Tari (wood vendor), interview, Pasir Putih, April 5, 2013.
\textsuperscript{38} Riri, March 6, 2013.
4.2.5 Distributing the bricks

Most brickmakers sell their finished bricks to brick vendors who resell the bricks to contractors and builders in and around Padang. These vendors often visit the brickmakers and negotiate a price for the bricks, when the brick demand is high, these deals are sometimes even made before the bricks have been fired. The brick prices differ considerable among the brickmakers due to differences in quality and quantity of the offered bricks. The brickmakers emphasized that they would preferably supply a big (government or private) building project to ensure a stable brick sale for a longer period.

The vendors collect the bricks from the brickyards and deliver them subsequently to the construction sites. Only a few brickmakers own a truck that they can use to transport their bricks directly to the builders. The transport of the bricks comprises almost one third of the retail price. Brickmaker Agung owns a small truck that he uses for the delivery of his finished bricks and the transportation of firewood for his kiln. Besides the transportation of his own commodities, Agung also uses his truck to earn some additional money. He buys the finished bricks from fellow brickmakers and delivers these bricks subsequently to a builder or contractor in Padang. By collecting the bricks from the brickyard and transporting those directly to the construction site, Agung can sell these bricks for 150% of the purchase price. Agung also makes use of his truck to earn money with the transportation of firewood. He drives with his truck to plantations and sawmills in nearby villages, buys the waste wood (e.g. old, unproductive rubber trees from the plantations) and subsequently drives back to the brickmakers in Lubuk Alung regency where he can sell the wood with some profit.

Moneylenders

Due to the difficulties the brickmakers encounter in ensuring enough working capital, they are often left without cash before their bricks are ready to sell. The majority of the brickmakers do not want to apply for a loan from financial institutions because they are scared and unknowledgeable about these institutions or they cannot provide the necessary collateral. In order to obtain working capital the brickmakers often borrow money from a local moneylender, who provides the brickmakers with a loan in return for the commitment from the brickmakers to sell their finished bricks to the moneylender. However, the moneylender offers only a price for the bricks, which is often 10-15% below the current market price paid by a brick vendor or a truck owner. Despite the high interest rates of these moneylenders, the brickmakers often feel that they have no other choice than using the informal loan services of the local moneylenders.

39 Agung, October 9, 2012.
40 Angga, January 24, 2013.
4.3 Conclusions

This chapter has discussed the brick-making practices and businesses in Lubuk Alung regency in detail. The family brick-making businesses in Lubuk Alung regency consist in general of a small plot of land with (often) access to the necessary resources, sand and clay, and a wood-fired brick kiln. On average four to five people are working in one brickyard. The brickmakers do often suffer financial difficulties due to delays caused by the weather and the fluctuating brick prices.

The brickmakers in Lubuk Alung regency follow a number of successive steps in the process of making clay bricks. The first step is obtaining the necessary resources, sand and clay, for making the bricks. These are excavated in the brickyards or procured from nearby sand and clay mining locations. The resources are subsequently mixed together by means of a buffalo in a large pit or a mixing machine. Most brickmakers use a buffalo to squeeze and blend the clay and sand into a coherent mixture. However, I encountered only one brickmaker using a mixing machine. Then the bricks are formed by means of wooden molds. Big lumps of mixture are pressed in the wooden molds by hand and subsequently turned upside down on the drying beds. The bricks need to dry for about three days in the sun to become more firm. The sun-dried bricks are subsequently stacked on a huge pile in the wood-fired brick kiln. After a firing process of four continuous days, the bricks are finished and ready to be sold and distributed to the constructors in Padang.
5. A future brickmakers’ cooperative in Lubuk Alung

This chapter analyses different perspectives on a future brickmakers’ cooperative in Lubuk Alung regency based on the policy documents and ideas of Build Change Indonesia (BCI) and a survey conducted among 30 brickmakers in Lubuk Alung regency. As discussed in Chapter 3, cooperatives can be built in many different forms and can exercise a large array of different tasks. Although it is obvious that in this case it would be a producers cooperative, the functions and tasks of the cooperative could differ substantially (e.g. only savings and credit, or a multipurpose model with marketing, training and R&D tasks). Therefore, this chapter delves into the information gathered about the preferences of the brickmakers and from the documents drafted by Build Change in order to draw a picture of the future brickmakers’ cooperative (as seen by BCI and the brickmakers).

The first section provides a discussion of the existing cooperatives in Lubuk Alung regency at the time of research and it briefly discusses the (short) history of the former brickmakers’ cooperative in the area. The subsequent section provides an elaborate overview of Build Change and its Better Building Materials project. As noted in Chapter 2, BCI introduced the idea of building a brickmakers’ cooperative as part of their Better Building Materials project. Then the third section discusses the perspective of BCI regarding a new brickmakers’ cooperative based on the policy documents drafted by and on personal communication with the project staff of BCI. Finally, the fourth section of the chapter provides the perspective of the brickmakers, based on a questionnaire conducted among 30 selected brickmakers in Lubuk Alung regency.

5.1 Cooperatives in Lubuk Alung regency

During my research, I encountered three multipurpose village cooperatives (or Koperatie Unit Desa, KUD) in three villages located in Lubuk Alung regency. These cooperatives are open to all kinds of businesses such as street vendors, farmers, handicraftsmen and even people without a business (e.g. housewives or retired people). Members of a KUD cooperative can store their savings in the cooperative, or apply for a small loan. At the time of research (January-April 2013) there was no active brickmakers’ cooperative, however, in the period 2005-2007 there was a brickmakers’ cooperative active in the area.

5.1.1 Multipurpose village cooperatives (KUD)

The multipurpose village cooperatives in Lubuk Alung regency provide a number of services for their members. The main functions of these rural village cooperatives are: saving and loan services, distribution of (agricultural) production inputs and the collection and marketing of the members’ output (International Co-operative Alliance - Asia & Pacific, 2007). The multipurpose cooperatives are public and accessible for anyone who wants to become a member, they do not make any distinction in what kind
of occupation or business their (potential) members have. The Lubuk Alung KUD II and III cooperative have both approximately 200 members.\textsuperscript{41} Everyone who wants to become a member has to pay both an investment fee of Rp. 100.000 (or € 7.75) and a monthly membership fee of Rp. 5000 (or € 0.39).\textsuperscript{42} The members can apply for a loan from the cooperative if they comply with the requirements of the cooperative. The cooperative loans are paid by the savings stored in the cooperative by the other members. The requirements for a cooperative loan entail inter alia; a minimum cooperative membership of half a year, and enough business potential to recoup the loan within a certain period. The cooperative does not charge interest, only an administration fee (e.g. Rp. 50.000 (or € 3.87) for a loan of Rp. 1.000.000 (or € 77.47)). The KUD cooperatives do also employ additional income generating activities (e.g. arranging electricity and phone bills for a particular region or village or renting a rice milling machine) in order to make some additional profit for the cooperative’s members. In the end of the year, all members get a share of the profit made and dividend over the total amount of money they saved and invested in the cooperative.\textsuperscript{43}

5.1.2 The 2005-2007 Brickmakers’ cooperative

The former brickmakers’ cooperative in Lubuk Alung regency was officially established on March 15, 2005, but ceased to exist already two years later. In 2002, eight brickmakers had initiated the process of establishing a cooperative by having a small meeting. As a result of this first meeting, the brickmakers set up an association, together with 10 other brickmakers who were convinced to join the first eight brickmakers.\textsuperscript{44} An association is an informal collaboration between brickmakers (i.e. due to its informal status an association is not bound to particular government regulations in contrast with a cooperative). One of the functions of this association was the collective procurement of firewood. The association could provide discounted firewood for the associated brickmakers due to its large scale procurement. This association had existed for two years until the official establishment of the brickmakers’ cooperative in 2005. In the heydays of the cooperative, 26 brickmakers were members. The board of the cooperative consisted of a cooperative leader, a secretary, a treasurer and two surveyors who investigated whether a member who applied for a loan would be able to comply with the requirements of obtaining a loan from the cooperative. The main functions of the cooperative were the provision of financial services (i.e. loans and savings), the shared procurement of inputs (e.g. firewood) and the collective marketing of finished bricks. The cooperative had been frozen in 2007 due the lack of working capital after some of the members demanded their investment fees back to participate in the Eid al-Fitr celebrations after the

\textsuperscript{41} Triago, January 31, 2013; Sumitro, January 31, 2013.
\textsuperscript{42} Triago, January 31, 2013.
\textsuperscript{43} Triago, January 31, 2013.
\textsuperscript{44} Matius (2005-2007 brickmakers’ cooperative leader), interview, Pasir Putih, March 29, 2013.
Ramadan. The members promised to remain members of the brickmakers’ cooperative, however, they did not return the disbursed investment fees. This created a lack of working capital that forced the board to freeze the cooperative and repay all members their invested shares.45

After the shutdown of the 2005-2007 brickmakers’ cooperative, some of former board members tried to rebuild and re-activate the former brickmakers’ cooperative in 2010. Unfortunately, this attempt failed. Although the former board members could find enough brickmakers who were willing to join the re-activated cooperative, the major obstacle appeared to be finding sufficient interested brickmakers who were able and willing to pay the required investment fee in order to secure their membership and to acquire enough capital to roll out the process of rebuilding the cooperative.46

5.2 Build Change’s Better Building Materials project
The NGO Build Change had initiated the Better Building Materials (BBM) project in the end of 2012. The objective of the project was to improve the small-scale brick-making businesses in Lubuk Alung regency and to increase the brick quality to an acceptable earthquake resistance level. As an external researcher, I was affiliated to the BBM project. The next two sections discuss the Build Change organization and the Better Building Materials project in detail.

5.2.1 Build Change
Build Change is an international non-profit social enterprise founded in 2004 and established in the United States of America that designs high seismic resistant houses in developing countries and trains builders, homeowners, engineers and government officials to build them. In combination with the public and private sector, Build Change aims at making long-term changes in building methods and practices to make them more earthquake-resistant. The organization works together with government institutions and (small) local businesses to produce and market better building materials (Build Change, 2012). After several projects in China, Build Change is currently working in Haiti and in Indonesia. The organization has built a long record of projects in Indonesia, started in 2005 to assist and support the people in Aceh in the aftermath of the 2004 Indian Ocean earthquake and tsunami. Build Change Indonesia’s primary task is the provision of high seismic resistant building training on (vocational) schools across Indonesia. In the beginning of 2013 the organization commenced a new project in the province of West-Sumatra; the Better Building Materials project.

**Build Change Indonesia**

Build Change Indonesia consists of approximately 35 staff members divided into two offices, the head office in Padang, West-Sumatra and a second office in Bandung, West-Java. The majority of the BCI staff is located in the Bandung office and consists of locally recruited building engineers for the high seismic resistant building trainings on vocational schools. The program of Build Change in Indonesia was managed by an expat from Ireland since September 2012. The other senior staff members are all recruited in Indonesia and divided between the two Build Change offices in Indonesia. The Irish program manager also attracted two new expat employees from Ireland for two new positions within BCI; first in the end of 2012 a sustainable development officer and three months later a research and development officer. Both employees were concerned with advocacy, policy making, and project design and implementation tasks at the head office of Build Change Indonesia. In March 2013, a student (also from Ireland) joined BCI in order to fulfill his six months placement on the application of microfinance. In contrast with my research oriented internship, he joined Build Change in order to assist the BCI employees and to gain work experience. During my stay, approximately 10 employees (including all overseas staff members) were based in the Padang office. Half of them working for the BBM project and the other people were mainly concerned with the daily management of BCI.

### 5.2.2 The Better Building Materials project

The BBM project of Build Change Indonesia addresses the fundamental issue of poor quality red clay bricks mainly used in residential construction. Bricks in Lubuk Alung regency are made by small-scale brick-making businesses, which are facing many financial difficulties due to the price-taker brick manufacturing industry. The aim of the BBM project is to improve the quality of the clay bricks to an acceptable earthquake resistant standard by improving the brick-making practices and standards, by investigating and addressing the social-economic drivers of poor brick production, the environmental impacts of brick production and removing the technological barriers (e.g. unstable firing temperatures in the kilns or the unstandardized sand and clay mixing methods and ratios) found in the brick producing family enterprises in the Lubuk-Alung area (Build Change Indonesia, February 2013).

The Better Building Materials project is managed by an Indonesian woman. The project staff consists of a technological supervisor, a project assistant/communication officer, the sustainable development officer, the research and development officer, the student intern and I (intern/external researcher). The project

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47 Brickmakers are the price-takers in the local brick manufacturing industry of Lubuk Alung regency, due to the large supply of bricks by the many brickmakers. Besides that, the brickmakers prefer a quick sale of their bricks providing them with sufficient capital to start a new production cycle. During the wet season the brickmakers can have more influence on the brick prices, due to a lower supply of bricks. However, this lower supply of bricks is a result of the seriously hampered brick-making process due to the heavy rain in the wet season.
manager coordinates and schedules the various project activities and she maintains contact with important key players (e.g. government representatives). The technical supervisor of the BBM project maintains contact in the field with all brickmakers and he implements field experiments and investigations. Besides these tasks, the technical supervisor was also supposed to help me as my research assistant and translator in the field. The communication officer (and project assistant) supported the project manager and carried out various activities to inform the Indonesian public about the BBM project. The sustainable development officer was for this project especially concerned with the design and formulation of the project plan. The R&D officer was designing, planning and conducting the various experiments, investigations and tests that were part of the project. The student intern’s tasks were mainly aimed at assisting the R&D officer with experiments and investigations in the field. Finally, I was also involved in the BBM project as an external researcher. The results and the gathered data of my research were meant to be used to support the decisions regarding the building of the (pilot) brickmakers’ cooperative.

The activities of the Better Building Materials project can be divided in two stages. The first stage of the project consists of research in the areas of technology and practices, environment and socio-economics. The project staff has conducted several experiments, tests and investigations related to these three areas of research in this first stage. One of the technology/practices experiments consisted of a brick strength test with different mixing ratios in order to identify the ‘optimal’ mixing ratio between sand and clay. Another experiment was conducted with alternative (more environmental friendly) fuel sources for in the brick kiln. Instead of using wood, BCI came with the idea to use the kernels from the palm oil-industry for firing the kilns. There is a huge palm oil industry in West-Sumatra and surrounding provinces that produce many ‘waste’ by-products, such as the kernels and the husks of the palm fruits. The husks are not suitable to burn due to toxic components. The kernels could be used in the kilns to prevent the cutting of forests and could possibly lead to a more constant (and thus better) firing temperature in the kiln. Finally, an extensive questionnaire about the financial situation of the brickmakers, together with the research I did, was supposed to be a part of the socio-economic investigation.

The eventual outcomes of the various tests, investigations and experiments should form the basis of the second stage follow-up project. This participatory project should be launched in September 2013 and facilitate the brickmakers in improving their businesses and in particular improve the brick quality to an acceptable earthquake resistance standard. The second stage of the project activities is aimed at communicating and implementing the findings of the first stage by setting up training programs in cooperative development, savings and loans, small enterprise development and improved brick-making techniques. Besides these training programs, a community event will be held to promote better building materials and campaigns on better brick-making and sustainable development will be developed (Build
Change Indonesia, February 2013). However, at the time I finished my research in Padang the BBM project team was still in the midst of the first stage of the BBM project, which involved the conducting of experiments with the different sand/clay mixing ratios and testing the new fuel source for the brick kilns.

5.3 Build Change Indonesia’s perspective on building a cooperative

At the onset of the Better Building Materials (BBM) project in October/November 2012 the initial project proposal, written in the internal Build Change document called ‘Brief scoping notes’, clearly indicated the necessity for building a brickmakers’ cooperative which could address the identified problems around the production of poor quality bricks (Build Change Indonesia, November 2012). In the scoping notes document, a brickmakers’ cooperative is identified as the problem-solver for the various problems encountered by the brickmakers in Lubuk Alung regency (see Box 5.1). The brickmakers are facing financial, environmental and technological problems. As production cost are high and income uneven, many brickmakers are in debt with high interest loans. The widespread use of timber to burn the brick kilns creates an environmental problem due to the scarcity of timber in the surrounding areas. (Build Change Indonesia, November 2012).

**A cooperative…**

…functions well in price-taker industries through scale and quality control
…allows research and development, making possible new technologies to be adopted in the industry
…eliminates the need of moneylenders and allows support to members with savings and loans
…allows a government backed DRR (Disaster Risk Reduction) initiative to stockpile quality bricks for emergency construction which can be supported through the cooperative
…allows the brickmakers to access new markets
…can brand and market bricks in new markets, once quality is assured and bricks are graded
…can develop standards for bricks and engage builders in training
…can guarantee purchase for quality bricks from members allowing them to plan for future production
…increases the income for all shareholders (or members)
…creates efficiency in the supply chains
…allows a large number of family enterprises to remain competitive in the market
…allows a focus on reducing family-based child labor in the industry
…engages the industry in reducing the environmental impacts
…is based on each member having one share and one vote

**Box 5.1 Reasons for building a brickmakers’ cooperative in Lubuk Alung regency, drafted by Build Change Indonesia (Build Change Indonesia, November 2012).**

Although Build Change Indonesia provided an extensive list of reasons (in the initial project proposal) for why a cooperative development strategy should be employed to solve the problems in the family brick-
making industry of Lubuk Alung, the organization did not substantiate their ideas in further detail in this initial document. A clear strategy for the cooperative development was not (yet) provided in the ‘scoping notes’ document due to its preliminary character. However, three months later, in the course of February 2013, the actual ‘BBM Project Plan’ document (Build Change Indonesia, February 2013) was finished. In the meantime, the BBM project members had already made a number of visits and conducted a couple of interviews with brickmakers, the leaders of two rural village cooperatives in Lubuk Alung (KUD II and III), government officials and a representative of MICRA (Indonesian Microfinance Innovation center, specialized in the building of cooperatives and setting up micro-finance initiatives). All these events, meetings and the associated knowledge accumulation ended up changing the actual objectives written in the initial ‘scoping notes’ document drastically.

In the BBM project plan, the central aim was no longer defined as cooperative development, but changed into tackling the problems of poor quality bricks by setting up a participatory investigation into the social, economic, environmental and technological barriers to brick improvement. The intended final outcome of the Better Building Materials project is: “to design a simple and affordable participatory project, based on evidence that can be scaled up to bring economic improvement to brickmakers, substantially improve the standard and overall quality of clay bricks and to reduce the environmental impact of the clay brick industry overall” (Build Change Indonesia, February 2013, p. 5). Therefore, by conducting several participatory investigations in different aspects of the brickmakers’ business, BCI would develop a participatory follow-up project to improve the brick-making businesses in Lubuk Alung regency. Part of this investigation was the setting up of a pilot cooperative (Build Change Indonesia, February 2013).

However, two months later in April 2013 the program manager of BCI dismissed the project goal of setting up a pilot brickmakers’ cooperative. In order to address the identified capital-flow problems among the brickmakers, the program manager proposed to set up a cooperative banking system that could provide affordable loans to brickmakers and ensure a safe place to store savings for brickmakers. However, eventually in June 2013, the cooperative banking idea was also changed into a capital injection plan in the already established multipurpose village cooperative (KUD III) in Lubuk Alung regency. Build Change would provide a single sum of money for the KUD III cooperative. This funding by BCI should be used to set up a brickmakers’ loans and savings scheme and to fund the first loans only meant for brickmakers who join the multipurpose village cooperative KUD III. By October 2013, according to information provided by a Build Change employee through e-mail, the collaboration with the KUD III cooperative had not yet been launched. Although, the objective of building of a multipurpose brickmakers’ cooperative (i.e. the cooperative should provide loans to its members, setup a quality control system, develop a collective marketing system, and allow research and development in order to bring new
technologies to the industry) was the main project goal at the initiation of the project, during the project planning phase the original goal of building a cooperative was transformed into a subordinate activity. Eventually the initial project goal was even reduced into a (financial) collaboration with one of the already established rural village cooperatives (KUD III) in the area.

5.4 **The brickmakers’ perspectives on building a cooperative**

One of the main objectives of this research is to investigate how the brickmakers would build a cooperative, and which opportunities and barriers the brickmakers foresee in the process of building such a brickmakers’ cooperative. This section analyses what kind of cooperative and in particular which functions a brickmakers’ cooperative should have according to the surveyed brickmakers. This analysis should provide a clear image of the needs and expectations of the brickmakers regarding the building of a new brickmakers’ cooperative in Lubuk Alung regency.

5.4.1 **Reasons (not) to join a cooperative**

The survey conducted among 30 brickmakers emphasizes in particular the consensus among the brickmakers regarding their preferred functions for a future brickmakers’ cooperative. More than 90% of the brickmakers’ replied in the survey that their first or second most important reason for joining a cooperative would be to get an individual loan from the cooperative (see Table 5.1). The second most (63%) indicated first or second choice to join a cooperative is the collective marketing of bricks. However, there are also other less widely mentioned reasons. Three brickmakers mentioned that their first or second choice to join a cooperative would be the use of collective assets (e.g. a mixing machine), two brickmakers would join a cooperative for collective resource procurements, and two brickmakers indicated that knowledge sharing about best practice could be an important reason for them to join a future cooperative (see Table 5.1). Remarkably, none of the surveyed brickmakers provided another reason to join a cooperative or responded that they would join a cooperative to store savings (as in a cooperative bank suggested by the program manager of BCI). However, sufficient savings of cooperative members are necessary for the provision of cooperative loans. As the vast majority of the brickmakers indicated that they would join a cooperative to get a loan, the precondition would be enough members who store their savings in the cooperative. If the cooperative members themselves could not accumulate sufficient capital for the granting of loans, the cooperative could try to attract external funding and/or loans from third parties (e.g. bank, government or NGO). It is important to note here that the brickmakers were only allowed to choose a first and a second choice reason from a list of possible reasons to join a future brickmakers’ cooperative in the conducted survey (see Appendix I). It is very well possible that a number of brickmakers would have chosen ‘to store savings’ (in the cooperative) as a third (or fourth) chosen reason to join a cooperative. Another possibility could be that the brickmakers do not (yet)
appreciate the storage of their savings as a valuable reason to join a cooperative. Nevertheless, the results of this question clearly indicate that the majority of the brickmakers want a cooperative that can support their business financially by means of a loan or with the collective marketing of their bricks.

Table 5.1 Reasons to join a future cooperative indicated by the surveyed brickmakers.

Suppose there would be a brickmakers’ cooperative in this area. For what reason would you join this cooperative?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency 1st choice</th>
<th>Frequency 2nd choice</th>
<th>Frequency 1st AND 2nd choice</th>
<th>Percentage 1st OR 2nd choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>To obtain a loan</td>
<td>20</td>
<td>8</td>
<td>28</td>
<td>93%</td>
</tr>
<tr>
<td>Collective marketing of end products</td>
<td>7</td>
<td>12</td>
<td>19</td>
<td>63%</td>
</tr>
<tr>
<td>No second reason</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>20%</td>
</tr>
<tr>
<td>To use a delivery truck or machines from the cooperative</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>Collective resource procurement</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>Knowledge sharing about best practice and standards to improve brick quality and increase production</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>To store savings</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Another reason</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>30</strong></td>
<td><strong>60</strong></td>
<td><strong>200%</strong></td>
</tr>
</tbody>
</table>

The survey did also cover a question about the reasons why the brickmakers would possibly refrain from joining a future brickmakers’ cooperative (see Table 5.2). More than half of the 30 respondents chose for the answer that they did not have a reason to refrain and that they want to join the cooperative. Five brickmakers indicated that they feared for bad management and that this could be a reason to refrain from joining a future cooperative. Three brickmakers replied that they are not able to pay the mandatory investment and membership fees, while one brickmaker responded that he did not want to pay the fees associated with the membership of a cooperative. The answers for this question clearly indicate that the majority of the brickmakers could not see a reason for refraining from joining a future cooperative. Overall, the survey data also suggests that the majority of the surveyed brickmakers really want to join a brickmakers’ cooperative.
Table 5.2 Reasons of the surveyed brickmakers to refrain from joining a cooperative.

**Suppose there would be a brickmakers' cooperative in this area. Why would you not want to join the cooperative?**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No reasons, I want to join the cooperative</td>
<td>18</td>
<td>60%</td>
</tr>
<tr>
<td>I am afraid for bad management</td>
<td>5</td>
<td>17%</td>
</tr>
<tr>
<td>I cannot pay the member/investment fees</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>Another reason</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>I do not want to pay the member/investment fees</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>I do not want to be a member of a cooperative</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

5.4.2 Financial difficulties

Although only 10% of the respondents indicated that they would refrain from joining a cooperative because they are not able to pay for the fees of the cooperative (see Table 5.2), still 40% of the questioned brickmakers indicated that they have to borrow money regularly in order to meet production costs or their domestic needs (see Table 5.3). So while a significant proportion of the surveyed brickmakers regularly need to take a loan, only 10% consider the mandatory fees of the cooperative as a barrier (i.e. they would not join a cooperative because they cannot or do not want to pay the investment or membership fee). This difference could indicate that the brickmakers value being members of a future cooperative very highly, as most (90%) are willing to pay the cooperative membership costs despite a substantial percentage (40%) of them being in regular need of loans to get by. However, to the question *Would the investment fee for becoming a member (or the periodical membership fee) work as a barrier for setting up a cooperative?*, approximately one third of the surveyed brickmakers replied that they do not know (yet) whether the investment fee or the membership fee of a future brickmakers’ cooperative will form a barrier (see Table 5.4). The cause of this uncertainty could be dependent on the amount of the fees, but possibly also the kind of payment interval. For some brickmakers it could be difficult to pay a membership fee on a monthly basis due to their irregular income. However, if the membership payment interval would coincide with revenue inflows (i.e. the brickmakers pay their membership fee each time after selling a batch of bricks) it would be much easier for most of the brickmakers to provide the necessary money.
Table 5.3 Money lending and the use of a moneylender.

(a) do you regularly lend money from someone?
(b) if yes, do you have to sell your bricks to this person below the market value in return for this loan?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>18</td>
<td>60%</td>
<td>No</td>
<td>3</td>
</tr>
<tr>
<td>Yes</td>
<td>12</td>
<td>40%</td>
<td>Yes</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>100%</strong></td>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

Table 5.4 Investment fee and monthly membership fee as barriers.

(a) could the investment fee for becoming a member work as a barrier for setting up a brickmakers’ cooperative?
(b) and could the periodical membership fee work as a barrier for setting up a brickmakers’ cooperative?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>17</td>
<td>49%</td>
<td>No</td>
<td>22</td>
</tr>
<tr>
<td>I don’t know</td>
<td>13</td>
<td>37%</td>
<td>I don’t know</td>
<td>11</td>
</tr>
<tr>
<td>Yes</td>
<td>5</td>
<td>14%</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35</strong></td>
<td><strong>100%</strong></td>
<td><strong>Total</strong></td>
<td><strong>35</strong></td>
</tr>
</tbody>
</table>

Three quarters of the brickmakers who frequently borrow money (see question (b) of Table 5.3) indicated that they regularly go to a moneylender in order to obtain a short-term loan. Moneylenders are often wealthy neighbors, fellow brickmakers or another wealthy person from one of the villages in Lubuk Alung regency. The money is often lent to the brickmaker without the requirement of a collateral or any personal guarantee. However, when the bricks are finished the brickmaker is obliged to sell his bricks to the moneylender for a dictated price (slightly) below the current market value. Moneylenders subsequently sell the bricks for a better price on the building sites and make their profit. Brickmakers, who are borrowing money from local moneylenders, are often not satisfied with the conditions accompanying the loans (i.e. too much interest) and want to quit using the services of the money lenders. However, many brickmakers do not see alternatives for borrowing money from a moneylender. They cannot borrow money from financial institutions because they do not have any collateral. Especially these brickmakers expect that the affordable cooperative loans would be an excellent opportunity for them to abandon the moneylenders.

48 A ‘moneylender’ is in this research defined as; a moneylender to which the brickmaker has to sell his or her bricks mandatory for a price below the current market value in return for a loan without a personal guarantee.
49 Zeze (brickmaker), interview, Singguling, March 6, 2013; Sura (brickmaker), interview, Kampung Kalawi, February 21, 2013.
50 Sura, interview, February 21, 2013.
5.5 Conclusions

Although BCI proposed initially a multipurpose cooperative, in the course of the realization of the BBM project its perspective narrowed after a couple of months into a cooperative banking system. This change of Build Change Indonesia is in line with the identified preference of the majority of the surveyed brickmakers for a cooperative that offers predominantly financial services for its members (i.e. loans). Besides the provision of cooperative loans, according to the brickmakers, the cooperative should also organize the collective marketing of bricks. Meanwhile a number of other possible functions for a future cooperative were preferred by some brickmakers. For example, knowledge sharing about the best practice or the use of collective assets (e.g. a delivery truck). The two identified preference functions for a future cooperative are both meant to improve the businesses of the brickmakers. Collective marketing of bricks by the cooperative could turn the price taker role of the brickmakers into a role of price maker on the local brick market. The cooperative loans could also enable some of the brickmakers to free themselves from their dependence on the local moneylenders.

However, the eventual withdrawal of BCI means actually that the prospect of building of a brickmakers’ cooperative in Lubuk Alung is discarded. The history of the 2005-2007 brickmakers’ cooperative, together with a failed attempt to re-activate the brickmakers’ cooperative in 2010 implies that the brickmakers need external support in order to build a cooperative. The latest idea of BCI is to provide a capital injection in one of the existing cooperatives in Lubuk Alung regency, allowing the brickmakers to apply for a cooperative loan from the existing rural village cooperative, without building a new brickmakers’ cooperative. Although this solution would provide the brickmakers access to affordable cooperative loans, it would not allow them to introduce gradually more cooperative services, such as collective marketing of bricks or the establishment of a quality control system. Nor will it allow a collective adaption or adaptation of new technological innovations and practices.
6. **Justifying the building of a cooperative**

This chapter applies the justification theory of Boltanski and Thévenot (1999; 2006) to analyze how the brickmakers in Lubuk Alung regency justify the building of a brickmakers’ cooperative. As noted in Chapter 2, the justification theory is developed to assess social actions taken in the regime of justice. The regime of justice applies to disputed situations in which equivalences play an important role. Equivalences are important in the regime of justice to reach a level of generality between the involved actors. In the regime of justice, a principle of equivalence is required to calculate and compare the various invoked arguments and justifications and to reach a peaceful agreement. The building of a brickmakers’ cooperative can be considered as social action taken in the regime of justice. The variety of opinions and ideas among the brickmakers about the purpose and functions of a future brickmakers’ cooperative forms the core of the dispute in this situation.

The distinct opinions and ideas among the brickmakers about how a cooperative should function are justified with arguments from various worlds. The different invoked justifications do not really or completely fit into one single world. If multiple worlds are invoked in a situation of dispute a composite situation is created. These potentially emerging composite situation complicate the process of successfully building a brickmakers’ cooperative in Lubuk Alung regency. This chapter provides an analysis of the various justifications with their related worlds, the emerged composite situations and the possibilities for resolving the disputed situations. The distinct justifications and worlds are identified and investigated by means of analysis of the perceived opportunities and barriers by the brickmakers for building a cooperative in Lubuk Alung regency.

The first section of this chapter discusses the different interests among the brickmakers and explicates why the building of a brickmakers’ cooperative in Lubuk Alung regency should be analyzed as a situation of dispute. The second section elaborates on the perceived opportunities of building a cooperative and the barriers are subsequently discussed in the third section. Each subsection of the second and third sections elaborates one opportunity or barrier, provides subsequently a categorization into one (or more) of the six worlds and eventually discusses how the possible (composite) conflict situation could be resolved. The perceived opportunities and barriers are analyzed and categorized by investigating why the brickmakers do perceive a particular barrier or opportunity, but also by investigating how the brickmakers qualify objects, events or people to support a barrier or opportunity. The final section of this chapter elaborates on the various invoked orders of worth and the accompanying composite situations found with the analysis of justifications given by the brickmakers for building a brickmakers’ cooperative in sections 6.2 and 6.3.
6.1 Building a cooperative: a situation of dispute

According to the International Cooperative Alliance (ICA), cooperatives should meet the common economic, social and cultural needs and aspirations of its members (International Co-operative Alliance, 2012). It is, however, difficult if not impossible to address all the different individual needs and aspirations of the many people within one cooperative. Therefore, it is important to establish a compromise between the members about what a cooperative should represent and what functions it should have. This process of forming a compromise is manifested in the initial process of defining the main purpose and functions of the new brickmakers’ cooperative.

As discussed in the chapter 5, the vast majority of the brickmakers desire to join a cooperative to apply for a loan and to market their bricks collectively. However, a few mentioned also other reasons to join a cooperative, such as the use of collective assets (e.g. a mixing machine or delivery truck owned by the cooperative), the collective procurement of resources, or knowledge sharing about the best practice. Although some of the mentioned reasons to join a cooperative are deliberated with the same mode of justification, e.g. obtaining a loan, and the collective marketing of bricks, can both be justified in the market world, this does not apply to all mentioned reasons. It is even possible that one reason or opportunity for building a cooperative is justified by means of multiple modes of justification (more about this in the next section). The major disagreement among the brickmakers, identified in Chapter 5, is the lack of complete consensus about the importance of certain reasons for the forming of a cooperative.

The different opinions and invoked justifications denote a situation of dispute. Further, the brickmakers’ perceptions and choices do not adhere to one principle of equivalence (or a single order of worth). The brickmakers invoke a number of justifications, which can be conflicting depending on the situation. In order to build a brickmakers’ cooperative, the different brickmakers need to resolve the various emerging conflict situations by means of reality tests or establishing new higher-level principles of equivalence in order to reach consensus. The higher-level principles of equivalence could be used to justify arguments from different, conflicting worlds.

6.2 Opportunities for building a brickmakers’ cooperative

The identified opportunities give more insight in how the brickmakers justify the building of a cooperative. Several interviews, the survey and ethnographic observations have resulted in the identification of the subsequent five opportunities for building a brickmakers’ cooperative perceived by the brickmakers themselves.
6.2.1 Access to capital

The greatest opportunity perceived by the brickmakers is access to capital in the form of a loan. When the brickmakers become members of a future cooperative they can apply for a loan from the cooperative with only a small interest (i.e. levied as an administration fee). Cooperative loans are issued by means of the interaction between members who want to store their savings and members who want to borrow money. The interest on a loan from the cooperative is small because it should only cover a compensation for the cooperative and a small interest for the brickmaker who saved his or her money in the cooperative. Cooperative loans can only be granted when there is enough working capital available within the cooperative. Although there is no brickmakers’ cooperative (yet), a significant part of the surveyed brickmakers indicated that they would join a cooperative to get an individual loan (see section 5.2).

A number of brickmakers indicated that they have difficulties with safeguarding sufficient working capital. A short-term cooperative loan could solve the encountered deficiencies, which occur often in the last stage of the production process just before finishing the bricks. The loans can be used to buy wood to fire the kiln or to pay the wages of the stoker for taking care of the burning process in the kiln. When the brick-making enterprise does not have sufficient cash-flow, the production process would be hampered with the consequence that it takes longer before the brickmaker can finish his or her bricks and earn money again. After selling the bricks, the short-term cooperative loan could easily be repaid with the amount gained through the sale of finished bricks.

The survey conducted for this research indicated that almost half of the questioned brickmakers had to borrow money regularly in order to meet production costs or their domestic needs. Domestic needs can be food, rent of the house, medical costs or school fees. Especially the high production costs (e.g., workers’ salaries or new resources such as clay or firewood) and the need to have significant sand and clay supplies create often a serious financial burden on the brick-making businesses (Build Change Indonesia, November 2012). This suggests that sufficient working capital is one of the most critical factors for business success in the small-scale brick industry. Brickmakers often do not have a suitable collateral to obtain a loan from financial institutions such as a (commercial) bank. The majority of the brickmakers who frequently borrow money indicated that they regularly go to a moneylender in order to get a short-term loan. A brickmakers’ cooperative could displace the practices of the moneylenders through cooperative savings and loans that allow the brickmakers to cope in periods of poverty (Build Change Indonesia, November 2012).

52 Angga (brickmaker), interview, Jalan Lingkar, January 24, 2013; Sukmo, Daksa and Yuli (brickmakers), focus group discussion, Singguliang, March 29, 2013.
53 Sumitro (large brickmaker and leader of village cooperative KUD III), interview, Pasir Putih, January 31, 2013.
Access to capital can be considered as a composite justification, rooted in both the market world and the industrial world. The brickmakers prefer and praise the cooperative loans because they do not need to provide any collateral and the disguised interests (i.e. collected through administration costs) are much lower than the disguised interest rates levied by the moneylenders (i.e. the lower price of bricks paid by the moneylenders to the brick makers). Therefore, the competitive cooperative loan is in this situation qualified as an important object in the market world. A loan from the cooperative can be used to facilitate short-term returns through commodity-money exchange. However, the argument fits also in the industrial world because the short-term loans (with a maximum period of two months) from the cooperative allow the brickmakers to become more efficient and productive in the long-term. The brickmakers can easily apply for a loan with fixed conditions and continue their production process without negotiating an expensive loan from a local moneylender. The easy access to affordable loans improves the stability and continuity of the brick-making business. Such stability and continuity can allow the brickmakers to make thorough multi-annual plans for improvements and upgrading of their brick-making process. This improved efficiency and productivity result in long-term returns for the brickmakers.

The incorporation of two distinct worlds (i.e. the market world and the industrial world) in the justification for this argument creates a composite situation (see Chapter 2). The brickmakers use two different modes of justification to legitimize the argument of access to capital and thus the formation of a cooperative. However, in this case a compromise between the short-term justification (market world) and the long-term justification (industrial world) can be made without any conflict. The primary argument is from the market world; the brickmakers want easier and cheaper access to capital, however, in the meantime the brickmakers also need long-term financial security in order to plan and make investments in their businesses. The two worlds are in this composite situation quite compatible with each other, which would imply that the higher-level principle could consist of the market world and/or the industrial world. In this composite situation there is no dispute, which means that the situation could actually belong to the regime of routine. In the regime of routine equivalences are activated and there is no situation of dispute. Therefore, in this case there is no need to establish a new common higher-level principle of equivalence because the composite situation may not have been created by a dispute.

The loans introduced by a new brickmakers’ cooperative could result in the displacement of a large part of the local moneylenders. The situation of actors resisting the building of a brickmakers’ cooperative (inter alia the moneylenders) is elaborated and evaluated in the next section about barriers.
6.2.2 Providing a brick-making training program

The brick quality differs extensively among the various brickmakers in Lubuk Alung regency, due to the different ways the brickmakers learned and acquired their brick-making methods and practices (Build Change Indonesia, November 2012). Brickmaker Tika told me that she learned the various practices in the brick-making process about 25 years ago from her parents when she was a child, at the time of research, her own daughter (age 12) did frequently tasks in her brick-making business.\(^\text{54}\) Two other brickmakers, Fendy and Dian, explained that they learned making bricks by several attempts on their own and from discussions with friends.\(^\text{55}\) The indicated modes of learning highlight the lack of any institutionalized learning in the traditional brick-making industry of Lubuk Alung regency (i.e. during the fieldwork I did not meet any brickmaker who had learned how to make bricks at a vocational school). Brick-making practices are generally taught by parents to children or between friends.

In order to improve the brick-making practices the cooperative could conduct research into the best practice of making bricks in collaboration with a local university or NGO (e.g. Build Change Indonesia conducted a brick strength test during my fieldwork (January-April 2013)) and provide its members with training on how to make good quality bricks. In particular the collaboration with a university, NGO or government institution could yield valuable results due to their access to scientific and methodological practices and skills, which the brickmakers may not already be familiar with.

The argument of developing a best practice and providing training in producing good quality bricks are actions meant to improve the productivity and efficiency of the brick-making businesses. So this opportunity can be considered as an argument from the industrial world in which productivity and efficiency are two central themes. The provision of training about how to make a good quality brick and launching campaigns to promote best practices, increase the brick-making competences of the brickmakers and could improve the efficiency of their businesses (e.g. training on how to fire a kiln in order to minimize production losses).

6.2.3 Setting up a quality control system

Eventually the cooperative could set up a quality control system and sell only bricks of the brickmakers who meet the quality standards. The drafting of a brick standard as well as a quality control system would create an assurance for brick purchasers and constructors that the procured bricks satisfy a number of minimum quality requirements. This assurance could enhance the marketing and amplify the demand for good quality bricks and could even result in contracts between the cooperative and large-scale brick

\(^{54}\) Agung and Tika (brick-making couple), interview, Pasir Putih, January 24, 2013.
\(^{55}\) Fendy (brickmaker), interviewed by BCI, Jalan Lingkar, January 9, 2013; Dian (brickmaker), interviewed by BCI, Pasir Putih, October 9, 2013.
purchasers. The cooperative could distinguish itself by selling superior bricks and try to setup a license or kind of a protected brand for these good quality bricks.\textsuperscript{56}

The arguments for drafting brick standards and the setting up of a quality control system can be categorized in the market world. Brick standards and quality control system can improve the brick sale and enable the brickmakers to enter new markets by means of their (superior) qualified bricks. The brickmakers can qualify their bricks after the implementation of the quality control system as more valuable high-quality bricks (i.e. a qualification in line with the market world). By improving the quality of the bricks the brick-making business can also increase its competiveness and acquire a more favorable position on the brick market. However, the actual process of quality improvement, on the one hand achieved by the provision of brick-making training program and on the other hand (indirectly) by the quality control system, could be considered as part of the industrial world. The process of quality improvement will result in a kind of efficiency increase for the brick-making businesses.

The opportunity of setting up a quality control system creates also composite situation. On the one hand this opportunity is justified from the market world (i.e. better selling possibilities due to the quality control system) and on the other hand the industrial world (i.e. the quality control system will engender a production process for good quality bricks). However, in this case both worlds are not in opposition. Therefore, there is no need to establish a compromise with a new common higher-level principle.

A quality control system could also act as a barrier for small brickmakers who have to incorporate several measures and put a lot of effort in reaching the appropriate quality standards to obtain the required quality standard for their bricks. The setting up of a quality control system seen as a barrier is discussed in section 6.3.

\textbf{6.2.4 Collective marketing of bricks}

One of the main future tasks of a cooperative could be the collective marketing of bricks. Representatives of the brickmakers’ cooperative could search the market for big brick deals (e.g. government or private projects) or establish links with real estate developers.\textsuperscript{57} The cooperative could buy the bricks from the brickmakers and sell these bricks subsequently to established brick purchasers or promote and market the bricks in new markets. The establishment and capturing of the agreements between the cooperative and brick purchasers give the brickmakers a guarantee that their bricks will be sold to the cooperative for a set price after finishing them. This assurance is very important for the brickmakers because it allows them to reduce investment risks and make long-term plans (Build Change Indonesia, November 2012).

\textsuperscript{56} Asmoro and Musa (large brickmakers), focus group discussion, Denai Saiyo, March 18, 2013.
\textsuperscript{57} Musa, March 18, 2013.
In accordance with the collective marketing of bricks the cooperative could also exercise some control over the prices on the local brick market. If a significant part of the brickmakers in Lubuk Alung regency will participate in the collective sale of bricks, the cooperative will become a major player on the brick market. Brick purchasers will have few options other than buying their bricks from the cooperative; hence, the brickmakers’ cooperative will become a price maker on the local brick market. This makes it possible for the cooperative to set a minimum price for the bricks in periods of low brick demand.

The justification from the brickmakers for this argument, the collective marketing of bricks, is based in the market world. A fair and fixed brick price and the security of sale can enable the brickmakers to maximize their profits. By uniting the produce of several brickmakers, the cooperative can potentially benefit from the increase of scale. With large quantities of bricks for sale the cooperative could enter new markets, which are not accessible for small quantities of bricks (e.g. large real estate developers or governmental building projects). The cooperative would aim at coordinating a significant part of the local brick market in order to turn the brickmakers from price takers into price makers. If the cooperative would succeed in setting the (minimum) prices, brickmakers can increase their profits in the short-run.

### 6.2.5 Increase disaster resilience

A cooperative could play a major role in the reconstruction process after a (natural) disaster (e.g. an earthquake or a tornado). A cooperative has the advantage that it is already organized to facilitate collaboration among brickmakers and affiliated actors. With the joint assistance of the cooperative members the (most) affected brickmakers can be supported in rebuilding their businesses. The cooperative could also request and allocate governmental rebuilding funds, which could be attracted more easily by a community organization such as a cooperative. The opportunity of improving the disaster resilience of the brickmakers is divided into five separately discussed sub-arguments.

**Improve disaster preparedness**

The cooperative could have the objective of disseminating information and guidelines on how to prepare for any future natural disaster. Besides the distribution of guidelines, the cooperative can also provide training, in collaboration with the regional governmental disaster agency (BPBD), on how to reduce the impact of future disasters. The capacity of the cooperative to readily gather and instruct its members could be very beneficial in the process of instructing brickmakers on how to deal with future disasters. The cooperative could also provide its members with practical guidelines on how to minimalize damage from disasters (e.g. not building a kiln near steep hills because the danger of landslides during or after

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59 Rojo (representative of the BPBD Padang-Pariaman), interview, Pariaman, March 18, 2013.
earthquakes or floods, and dig the kilns one meter into the ground to make them more firm and resistant to earthquakes).  

The dissemination of information and guidelines, and the provision of training in disaster preparedness for the members of the brickmakers’ cooperative can be qualified as objects or events pertaining to the industrial world. The training and guidance of the cooperative should improve the resilience and preparedness of the brickmakers and make them thus more efficient and productive in the aftermath of natural disasters.

**Initiate and coordinate Gotong Royong recovery activities**

The building of a cooperative creates a network of (social) connections between the members and these links could be used in the aftermath of disasters to mobilize the cooperative members for Gotong Royong initiatives. The general definition of the Indonesian principle of Gotong Royong is the cooperation within and between social networks (Mardiasmo & Barnes, 2013). This cooperation is often for the common good of a community or village (e.g. the maintenance of irrigation ditches or the joint organization of a funeral). However, this could also be the rebuilding of a (heavily) damaged brick kiln of a fellow brickmaker. The affected brickmakers may be supported in their reconstruction efforts by other brickmakers. Beside the mobilization of the brickmakers, the cooperative could also play an important role in the coordination of the Gotong Royong activities. Immediately after the disaster one of the board members of the cooperative would have to investigate which members are affected by the disaster, assess the extent of the damage, and then the cooperative leader could come up with a plan how to rebuild all affected brick-making businesses with the joint support of all cooperative members.

The Gotong Royong recovery activities initiated and facilitated by the brickmakers’ cooperative belong to the civic world. The activities are aimed at collective actions in order to support the people who (have) suffered the most in the aftermath of a natural disaster. Therefore, in this argument personal gains have subordinate importance in relation to the common welfare of all members.

**Provide recovery loans**

In the aftermath of a disaster, brickmakers need money to rebuild their enterprises and to bridge the gap between the moment that their business and their bricks have been destroyed and the moment that they have restored their business and sold a new batch of bricks. This financial gap can last up to three months because (some of) the affected brickmakers have to rebuild their business from scratch. The cooperative

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60 Šumitro, March 18, 2013.
61 Budi (brickmaker), focus group discussion, Singguliang, March 29, 2013; Musa, March 18, 2013.
could reserve a part of their capital for unexpected events (e.g. for natural disasters), this capital would only be used to provide loans for members who have been affected by a disaster. When the cooperative does not have sufficient capital to provide loans for all affected brickmakers, it could search for a third party, which could provide the necessary funding. This third party can be a bank, (local) government institution or an NGO focused on post-disaster recovery and reconstruction.

This argument is just like the previously discussed Gotong Royong activities, from the civic world. The cooperative has a small budget reserved for recovery loans. The money for this budget is provided by means of investments and contributions of all members, only the most affected members are entitled to it first. In this argument is a certain minimum welfare level for all brickmakers more important than equal benefits for all. This minimum welfare level results in a preferential treatment for the most affected brickmakers (just like Gotong Royong) and equalize the welfare of all cooperative members.

**Facilitate external support**

The building of a cooperative would result in an organization representing a number of brickmakers with possibly similar interests and demands. Besides that, the cooperative has also a legal legitimacy. By creating a cooperative, the voices of the affiliated brickmakers are united in one body (the cooperative). The advantage of this is that one body can then represent a whole group of individuals to the outside world. The cooperative could apply for post-disaster reconstruction subsidies or funds from local government institutions, but also from NGOs or private companies. Governments should reach as much of its people as possible and by supporting a cooperative, the government can even use the organizational capacities of the cooperative for a fair and balanced allocation of financial support.

The uniting of interests of all cooperative members should be considered as a civic world argument. The cooperative would act as a spokesperson of all members and thereby any individual deviating interests of the brickmakers are set aside in order to apply for post-disaster reconstruction subsidies or funds.

**Increasing the overall disaster resilience of Lubuk Alung regency**

A brickmakers’ cooperative could play an important role in increasing the disaster resilience of the entire Lubuk Alung area. In the aftermath of a natural disaster the brickmakers’ cooperative could effectively support the local people by quickly recover the brick-making industry (e.g. by means of the earlier mentioned Gotong Royong activities, cooperative recovery loans and the pooling together of resources). Due to the efforts of the brickmakers’ cooperative and the brickmakers themselves, the necessary supply

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63 Daksa and Budi, March 29, 2013; Sumitro, March 18, 2013.
64 Sumitro, March 18, 2013.
65 Musa, March 18, 2013.
of bricks for residential reconstruction practices could be restored and possibly even increased and accelerated after a natural disaster. A significant element of the process of quickly returning to the situation before a natural disaster is the ready availability of building materials such as bricks in the aftermath of the disaster.

Increasing the overall disaster resilience of the people living in Lubuk Alung regency is a common goal, which can only be achieved when the brickmakers collaborate and prioritize the cooperative objectives above their own personal interests. The provision of recovery loans, Gotong Royong initiatives and increasing the overall disaster resilience in Lubuk Alung can all be considered as measures for the common good and thus pertaining to the civic world.

**Disaster and damage as stabilizing objects**

Nevertheless, some of the measures discussed above could appear very beneficial for some brickmakers (i.e. the disaster-affected brickmakers) while for other (not affected) brickmakers it could form a burden (e.g. participation in the Gotong Royong initiatives). After the occurrence of a disaster, this could create a tension between the disaster-affected brickmakers and the not affected brickmakers. Brickmakers who have not been affected by the disaster could blame the cooperative of prioritizing the affected brickmakers too much. The not affected brickmakers could accuse the cooperative of prioritizing a small group of members (i.e. the disaster-affected brickmakers) and neglecting the primary cooperative functions (e.g. collective marketing of bricks, or provide training). When this dispute emerges, a composite situation is created in which the justification from the civic world (i.e. increasing disaster resilience) will collide with the industrial/market world (e.g. collective marketing or training). Eventually the not affected brickmakers could decide not to participate in the Gotong Royong initiatives or even quit the cooperative due to the excessive attention for the disaster-affected brickmakers. Although the cooperative could set up various initiatives to increase the disaster resilience of its members, or to support the disaster-affected members with loans or reconstruction initiatives, the cooperative should not lose its primary purpose of serving all its members (i.e. also the members who have been less or not affected by the disaster). However, for a cooperative in a post-disaster situation it could prove impossible to assist both its members in their recovery and simultaneously performing their ordinary tasks. A solution would be a compromise between the two opposing worlds. In order to reach this compromise a new higher-level principle should be established. This higher-level principle could be ‘temporary emergency relief’, which denotes an important role for the civic world, while considering the industrial, and market worlds by emphasizing the temporary character of the compromise. In this compromise, the disaster and the damage caused by it could be qualified as objects to support the higher-level principle of ‘temporary emergency relief’. Once the damage of the disaster has been dealt with and the most affected people are supported,
this common higher-level principle cannot suffice anymore and the brickmakers have to make a new compromise or return to the earlier adhered worlds.

### 6.3 Barriers for building a brickmakers’ cooperative

The brickmakers did not indicate only opportunities, the fieldwork of this research resulted also in a number of perceived barriers for building a brickmakers’ cooperative. In the following subsection each barrier is discussed followed with an associated categorization into one (or more) worlds and possibly an analysis how the involved actors could come to a compromise in a composite conflict situation.

#### 6.3.1 Lack of money

During the interviews, a few brickmakers raised serious concerns about whether they would be able to pay the investment fee and especially the periodical membership fee. The investment fee is required on the one hand as a security that potential members will comply with the objectives and rules of the cooperative and on the other hand to create working capital for the cooperative. The brickmakers stressed that they are very dependent on external influences (e.g. the weather) and on the revenue from their brick sales. In periods with a lot of rain, the production period can be extended by weeks. While in periods of low demand it could take up to three additional weeks before a batch of bricks can be sold for a fair price. During these additional three weeks, the next production cycle is already fully ongoing, creating demand for capital (for material resources and labor costs). Brickmakers Mulia and Sura are in particular concerned about the financially difficult situations (e.g. during low brick demand or in the wet season) in which they will not be able to pay the membership fee of a future cooperative. The brickmakers can never be sure when they will earn money again due to the high dependence on external influences. So paying a membership fee every month can become very difficult for some brickmakers.

Capital is necessary for the building of a cooperative and to start the cooperative’s activities. Although most (more than 90%) of the surveyed brickmakers indicate that a brickmakers’ cooperative could be the solution for their capital problems (i.e. by applying for a cooperative loan), without sufficient seed money it would be impossible to build a cooperative. However, an external party (e.g. a bank or NGO) could provide the required seed money to build the cooperative. Nevertheless, it is still important that sufficient cooperative members store savings in the cooperative in order to create sufficient working capital for the cooperative. None of 30 surveyed brickmakers indicated that they would join a cooperative (as a 1st or 2nd choice) to store their savings in the cooperative (see chapter 5), the working capital required for...
meeting overhead costs and act as a source for the provision of cooperative loans. The cooperative service of providing loans could only be provided in conjunction with capital deposits of the cooperative members.

The lack of money for building a brickmakers’ cooperative is an argument justified in the industrial world. The argument is that without sufficient investment capital from the brickmakers it will be impossible to build a cooperative. Many of the brickmakers’ enterprises do not have and cannot sustainably create sufficient capital to build a cooperative. However, the brickmakers could search for other interested parties (e.g. local government institutions or development NGOs) who are willing to come up with sufficient funding for the brickmakers to build a cooperative.

### 6.3.2 Distrust in former cooperative board

A number of brickmakers raised their doubts about the integrity of a new cooperative board.69 These doubts were mostly fed by the stories and rumors about the former 2005-2007 brickmakers’ cooperative board, which was considered to be biased in allocating loans and subsidies. The former board members are accused of giving priority to their own businesses and those of allied brickmakers (e.g. in the allocation of government funded subsidies). The actual experiences of the interviewed brickmakers who were members of the 2005-2007 brickmakers’ cooperative is not in line with the above discussed accusations. These people did not mention anything about the unfair practices of the 2005-2007 cooperative board. However, they emphasized that some of the 2005-2007 cooperative members did not agree with the rules regarding the membership fees, which resulted in a number of disobeying brickmakers (i.e. they did not pay their membership fees).70 However, the former leader of the 2005-2007 brickmakers’ cooperative subsequently contradicts that there has been a conflict among the cooperative members about the rules of the cooperative.71 The different and conflicting statements confuse and deteriorate the image of the former cooperative (and its board). This has created distrust in a new brickmakers’ cooperative, which could prevent current brickmakers from joining a new cooperative. Additionally, the ceasing of the former cooperative has created a decline in the confidence of the viability of a new brickmakers’ cooperative.72

This argument could be justified in two ways. First, preferential treatment within a cooperative board is impermissible. A cooperative should be fair and equal towards all its members, without exceptions. This is a justification from the civic world supported by the cooperative standard that all members are equal.

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69 Adhi, Rajasa, Ardhi and Arto (brickmakers), personal communication during survey, Pasia Laweh, March 13, 2013.
70 Asmoro, March 6, 2013; Zeze (brickmaker), interview, Singguling, March 6, 2013.
72 Matius, March 29, 2013.
This cooperative standard is qualified as an object from the civic world. However, when the cooperative board is not fair and equal towards all members there is a lack of justification. The preferential treatment is the object that demonstrates the lack of justification in the civic world. The second way to justify this barrier is that the distrust among some brickmakers regarding the former cooperative board is a lack of legitimization based on the world of opinion. The former cooperative board was very known, but received disrespect from a number of brickmakers regarding their alleged preferential treatments. The brickmakers’ distrust has been created by the notoriety of the former cooperative board. The brickmakers who raised their doubts about the trustworthiness of a new cooperative board based these thoughts on the opinions of fellow brickmakers. The contradicting stories of former cooperative members worsen the trust of the people in a new brickmakers’ cooperative. The rumors, doubts and contradicting stories about the competences of the former cooperative board are qualified objects denoting the lack of justification in the world of opinion.

So this barrier is characterized by a composite situation with a lack of justification from both the civic world and the world of opinion. In a new cooperative, the lacking justifications from both worlds need to be turned into supporting justifications and should be aligned with each other without being in opposition. A new cooperative board could be the new common higher-level principle constituted by known and trusted local brickmakers and supported by a clear and transparent cooperative policy (as a stabilizing object for this higher-level principle).

**6.3.3 Resistant actors**

The building of a brickmakers’ cooperative, and in particular a cooperative banking system, could also attract resistance from non brick-making actors, such as the local moneylenders and brick vendors.\(^\text{73}\) Unfortunately, I did not have the chance to interview any resistant actors about the their opinion of building of a cooperative due to constraints of time and the restricted availability of translator and transportation of the host organization.

With the introduction of cheap (and competitive) cooperative loans the more expensive loans of the moneylenders could be displaced. Although this could also mean the termination of the moneylenders’ practices, these people could still play a role for the brickmakers in the provision of quick loans for emergency needs only. The moneylenders do also have a well-developed network with contractors and suppliers.

\(^\text{73}\) A moneylender is a locally known person who lends money to the brickmakers without collateral. After finishing a batch of bricks the brickmakers are obliged to sell their bricks below the current market price to the moneylender as a compensation for their loans. The brick vendors are the people who buy the bricks from the brickmakers and transport them to the constructors in Padang.
other brick purchasers, which could be very useful in setting up a collective brick marketing. Therefore, the moneylenders could be very useful for the making of a cooperative instead.

Another resistant group of actors could be the intermediary brick vendors. The collective marketing of bricks could mean that the brickmakers (via the cooperative) turn into price makers instead of price takers. The collective marketing of bricks by the cooperative entails the collection, transport, sale and delivery of bricks to the contractors or other interested brick purchasers. These operations are currently predominantly carried out by the brick vendors. The profits of the brickmakers may thus be maximized at the expense of the brick vendors. Therefore, the introduction of a collective brick marketing by the cooperative would probably mean the displacement of most brick vendors. However, just like the moneylenders, the brick vendors do have a lot of knowledge and a broad network with contractors and brick purchasers that could be very valuable for the cooperative. Some brick vendors could collaborate with the cooperative and support the cooperative with establishing a collective brick marketing strategy.

There are two possible scenarios for the resisting actors after the establishment of a brickmakers’ cooperative. The first scenario is that the practices of the moneylenders and brick vendors in the local brick-making industry will be displaced altogether. The repudiation of the moneylenders and the brick vendors could be justified by the market world. The cooperative loans are more competitive and cheaper for the brickmakers than the loans offered by the moneylender. The same could account for the brick vendor; due to the large scale marketing possibilities the cooperative could offer more affordable prices for the bricks and subsequently compete the brick vendors off. Although the brick vendors and moneylenders probably do not accept their displacement by the cooperative, it is justified by the market world. The moneylenders and brick vendors could only prevent their redundancy by offering more affordable loans or higher procurement prices for the bricks than the cooperative.

In the second scenario, some moneylenders and brick vendors continue to play a role in the local brick-making industry of Lubuk Alung. Nevertheless, not all brick vendors and moneylenders might be incorporated into the new brickmakers’ cooperative and their role would be different from before. The network of the moneylender or brick vendor, which the new cooperative could use may be qualified as an object from the industrial world. While the displacement of the practices of the brick vendors and the money lenders is justified in the market world, the establishing of a collaboration with the outcompeted brick vendors and/or moneylenders is a justification based in the industrial world. This would create a composite situation with the market world and the industrial world without being in opposition. The new role of the brick vendor and/or the moneylender in the cooperative could be qualified as an object to
support the compromise of this composite situation, which could be justified both in the market world and in the industrial world.

6.3.4 A quality control system as a barrier

Unfortunately the opportunity of setting up a quality control system is not a universal and equal benefit for all brickmakers; in particular large brickmakers can benefit more easily from a quality control system. The setting up of a quality control system could actually also complicate and perhaps even reduce the cost efficiency of the brick-making process, due to the new strict production requirements and additional control measures necessary to guarantee a good quality brick. Measures to guarantee good quality bricks could become an obstacle for brickmakers, especially when the quality control system measures demand the implementation of additional practices for the brickmakers (e.g. brick testing and administrative tasks). These practices are probably easier to implement for the large-scale brickmaker (i.e. brickmakers with more than three kilns) than the small brickmakers. In this sense the setting up of a quality control system could form a barrier for building a cooperative from the perspective of small brickmakers. Additional control measures and new strict production requirements, required to ensure a certain brick quality, can both be qualified as objects complicating and prolonging the brick-making process for (small) brickmakers. This qualification denotes the relevance of these objects in the industrial world. The arguments that a quality control system will hamper the brick-making process (and thereby probably reduce the efficiency and productivity) are based in the industrial world.

However, the opposing justifications regarding the setting up of a quality control system result in a situation of conflict. On the one hand the setting up of a quality control system could support the brickmakers in engendering the production process of good quality bricks (as discussed in section 6.2.3) which could improve their profits. On the other hand the establishment of a quality control system could become a serious barrier for small brickmakers (i.e. they need to incorporate additional practices and measures to guarantee a certain quality of their bricks). Both justifications are rooted in the industrial world, so there is no composite situation with opposing worlds. However, in order to resolve the situation a reality test must be conducted. In a reality test different justifications pertaining to the same world are compared with each other to evaluate which justification is the worthiest according to the principles of the relevant world. In this situation the reality test could be a pilot initiated by the cooperative with multiple (small and large) brickmakers to identify whether the introduction of a quality control system would result in improved efficiency, productivity and profits for the participated brickmakers or not. The outcome of this pilot project would indicate which justification is more worthy according to the industrial world and provide the solution for the conflict.
6.4 Conclusions

This chapter has analyzed how different opportunities and barriers, perceived by the brickmakers for the building of a brickmakers’ cooperative in Lubuk Alung regency, can be justified and how the possible emerging (composite) conflict situations could be resolved by means of a reality test or a common higher-level principle of equivalence based on Boltanski and Thévenot’s justification theory. The main finding is that the majority of the perceived opportunities and barriers are justified by the industrial world or/and market world without being in opposition. This finding is quite remarkable in relation to the cooperative principles of the ICA (2012) which pertain largely to the civic world.

6.4.1 Opportunities

The identified opportunities were mainly reasoned from the personal perspectives of the brickmakers and aimed at benefitting and improving their brick-making businesses. Most of the opportunities are therefore categorized in the market and industrial worlds. Although these two distinct worlds are often simultaneously evoked, in none of the situations the two worlds were in opposition. For instance, the opportunity of access to capital is justified from both the market and the industrial world without being in opposition. The setting up of brick-making training program and the provision of education by the cooperative are both solely based in the industrial world, due to the underlying objective of teaching the brickmakers and hence increasing their efficiency and productivity. The third opportunity of establishing a quality control system is again justified by the industrial and the market world, making it a composite situation without actually containing opposite worlds in this situation. The fourth opportunity of collective marketing is justified by the market world due to its objective of increasing the brick profits for the brickmakers. Finally, the invoked disaster resilience opportunities are predominantly based on collective action and community engagement and therefore located in the civic world. Therefore, all identified opportunities, except for the disaster resilience opportunities, are based in the industrial or/end the market world.

6.4.2 Barriers

The identified barriers for building a brickmakers’ cooperative are predominantly justified in the industrial world. The lack of capital available for the brickmakers hampers the building of a cooperative. This barrier is rooted in the industrial world, because the brickmakers are not wealthy enough to realize or attract sufficient money for the building of a brickmakers’ cooperative. The local moneylenders and the brick vendors could attempt to resist the building of a brickmakers’ cooperative. However, if they will be invoked in the new brickmakers’ cooperative, their network and knowledge could be utilized and their cooperation could become an opportunity instead of a barrier. This opportunity would be justified in the industrial world due to knowledge accumulation and the formation of a network, both important aspects
of the industrial world. The third barrier about the rumors of preferential treatments of the former 2005-2007 brickmakers’ cooperative board and the conflicting stories of former cooperative members create a burden for the building of a new brickmakers’ cooperative in Lubuk Alung. The problem of preferential treatment by the board management can be argued as a lack of justification for the civic world, which would emphasize that all cooperative members are equal. However, the confusing stories and rumors about nepotism of the 2005-2007 brickmakers’ cooperative board do also create a lack of justification in the world of opinion. Therefore, this barrier is a composite situation without conflict, pertaining to the civic world and the world of opinion. A final barrier identified in this chapter is related to the opportunity of setting up a quality control system. The associated quality measures and additional practices required to ensure good quality bricks may extend and complicate the brick-making process and could become an additional burden, especially for the small brickmakers. Increasing the complexity and decreasing the efficiency of the brick-making process would be considered as a lack of justification for the industrial world.

6.4.3 In conflict with ICA’s cooperative principles

Boltanski and Thévenot (2006) emphasize that community engagement, the common good and gathering for collective action are key for social actions in the civic world. In this world it is important that people join, unify and mobilize themselves into collectives. Individual values need to put aside in order to assemble collective objectives (Boltanski & Thévenot, 2006). The logics of the civic world will fit with the objectives of cooperatives; the building of a cooperative is a common project (Rousselire & Vzina, 2009). The most remarkable finding of my analysis is that the brickmakers included in this research mainly hauled justifications from the market and industrial worlds for building a cooperative. This obviously makes sense when a brickmaker approaches the building of a cooperative from a personal business perspective (i.e. with the aim to maintain or increase the revenues of his or her business). However, the seven guiding principles for cooperatives formulated by the ICA (as discussed in Chapter 3) are essentially rooted in the civic world. The guideline principles stress the importance of (voluntary) membership and participation for all interested people. In my analysis, only the justifications related to the identified opportunity of increasing the disaster resilience of the brickmakers and the barrier of distrust caused by rumors about preferential treatments of the 2005-2007 cooperative board pertain to the civic world. The majority of other situations regarding opportunities or barriers for the building of a new brickmakers’ cooperative are justified in the market world and/or the industrial world.
The analysis conducted in this chapter has identified a discrepancy between the brickmakers in Lubuk Alung who justify the building of a cooperative predominantly with arguments pertaining to the market and the industrial world, and the ICA’s (2012) seven cooperative principles, which are considered to belong to the civic world. The identified discrepancy could also be interpreted as a difference between top-down initiatives and bottom-up perspectives. While NGOs and government institutions would rely on, for instance, the seven cooperative principles of the ICA when building a cooperative, the beneficiaries (the people on the ground) could have different incentives and requirements for the building of a cooperative. This case study shows that top-down initiatives (for the building of a brickmakers’ cooperative) should provide sufficient room and opportunities for a transformation of the project into a bottom-up approach. This would imply that the NGO Build Change should appreciate and accommodate the industrial and market world requirements of the brickmakers in the process of building a cooperative.
7. **Summary and conclusions**

In this final chapter I will return to the research question stated in the first chapter of this thesis. How do the brickmakers in Lubuk Alung regency justify the building a cooperative? As indicated in the central question I was in particular interested in the process of building a cooperative and the invoked justifications by the various involved actors (i.e. primary the brickmakers). The justification theory of Boltanski and Thévenot (2006) provided a framework to analyze the different (conflicting) justifications for the ideas and opinions of the involved actors. By investigating the different invoked arguments and their associated justifications I could construct potentially emerging situations of conflict in the process of building a brickmakers’ cooperative. These conflict situations should be resolved to build successfully a cooperative. The main finding of this research is that the invoked justifications of the brickmakers for building a brickmakers’ cooperative belong predominantly to the industrial world and the market world. The brickmakers perceive in particular access to capital and the collective marketing of bricks as major opportunities for the building of a cooperative. Nevertheless, the cooperative principles defined by the International Co-operative Alliance (2012) belong to the civic world. This discrepancy between the invoked worlds of the brickmakers and the world characteristic for the cooperative principles could be explained by the brickmakers’ (personal) perspective focused at improving and benefitting their businesses.

The first section of this concluding chapter provides a summary of the findings. In the second section are the implications deriving this research discussed.

7.1 **Summary of findings**

First a brief overview of the brick-making practices is provided to create a better understanding of the context and background of this particular case study. The many interviews, focus group meetings and the conducted survey part of this research have identified a number opportunities and barriers for the process of building a brickmakers’ cooperative. These identified opportunities and barriers with their justifications and relevant worlds are discussed in the second and third subsections. The potentially emerging (composite) conflict situations are also discussed in these subsections, with special emphasis on the establishment of a possible common higher-level principle or the execution of a reality test, which could resolve these potential conflict situations.

7.1.1 **Brick-making practices**

This research has investigated the process of making bricks in the Lubuk Alung regency (largely based on observations at a single brickyard and interviews with a few brickmakers, so it may not reflect the diversity of local brickmaking practices). The brickmakers in this particular area have often a small-scale
family business containing only one brick kiln. The bricks are produced by means of a number of successive steps. The first step in this process is the excavation of the resources for a brick: clay and sand. Most brickmakers dig sand and clay from the hillsides located in their brickyards, often without the use of heavy excavating machinery. However, these resources are not infinitely available at their plot of land. When the resources are depleted in the brickyard, the brickmakers can either move to another plot of land or procure sand and clay from one of the bigger resource pits in the area. In these large pits, sand and clay are excavated by means of excavators and transported to brickmakers or other large-scale sand/clay purchasers (e.g. Padang Cement factory) in small trucks.

The subsequent step, is the mixing of sand and clay. This is often done by means of a buffalo walking in circles in a shallow pit to mix and squeeze the sand and clay into a coherent mixture. I only encountered one brickmaker in the Lubuk Alung area who made use of a petrol engine powered mixing machine. The majority of the brickmakers did not want to use the mixing machine and supported their choice by justifications such as the (perceived) high cost of the mixing machine or its unsuitability for mixing the kind of sand and clay in this area.

After having made a coherent mixture of sand and clay, the brickmakers have to mold the bricks. This is done by means of smashing big lumps of the mixture into a wooden mold containing six brick shapes. The excessive mixture on top of the mold is removed and the mold is turned upside down on the drying beds in the brickyard. Although brickmakers in other parts of Indonesia are using shaping machines, I did not see these machines being used in Lubuk Alung. One of the interviewed brickmakers indicated that a shaping machine would be incompatible with the kind of sand/clay mixture used in the Lubuk Alung area.

The successive step in the brick-making process is the drying and firing of bricks. First the bricks are laid down on drying beds in the brickyard. The bricks have to be dried for about three days in the sun and during these days, the brickmaker has to turn the bricks several times to ensure complete drying. The bricks are subsequently stacked on a huge pile in the brick kilns. On the bottom of the pile are three tunnels left open in which the brickmakers have to burn a wood fire for approximately four days. The brickmaker has to increase the fire gradually to a zenith on the third day and then the fire has to be reduced slowly in the final day. The high demand for fire wood from the brickmakers and the low availability in the region, result often in bad (or changing) qualities of wood, which complicates the execution of the firing process.

The final step in the process is the sale and distribution of the finished bricks. Only a few brickmakers own a truck, which can allow them to deliver the bricks to contractors or other interested brick purchasers mostly located in Padang. The majority of the brickmakers sell their bricks to brick vendors, who buy
several loads of bricks from the brickmakers, transport the bricks, and subsequently sell the bricks with a profit to contractors located in Padang. About 30% of the surveyed brickmakers apply regularly for a loan from the local moneylender, which obligates these brickmakers to sell their bricks for a price below the current market price in order to return for the loan they received from these moneylenders. The moneylenders do not ask for a guarantee before giving a loan, but do make of profit on the sale of the cheaply acquired bricks.

**7.1.2 Justifying the opportunities**

The main opportunity perceived by the majority of the brickmakers is access to capital. A cooperative could establish a loan service for its members with affordable interest rates. The brickmakers adhere to both the industrial world and the market world to justify this opportunity. The cooperative loans could be used to facilitate the continuation of their business in periods of (financial) adversity and therefore provide short-term returns through commodity-money exchange. The cooperative loan is in this situation qualified as an important object belonging to the market world. However, the cooperative loans do also provide a financial security for the brickmakers. Allowing the brickmakers to make long-term plans for improving (the efficiency and productivity of) their businesses. This justification for increasing the efficiency and productivity of the brick-making businesses in the long-run pertains to the industrial world.

The two different invoked worlds in the justifications for this opportunity denote a composite situation. In this situation is no opposition and therefore the two worlds can be evoked together. However, the access to capital opportunity (i.e. the cooperative loans) could create resistance from the local moneylenders. The barrier of resisting actors is discussed in section 7.1.3.

The second identified opportunity is the setting up of a brick-making training program. The brickmakers could improve the efficiency and productivity of their businesses through their participation in the brick-making training program. The argument about efficiency and productivity increase belong to the industrial world. A third related opportunity is the setting up of a quality control system. This justification is also justified in the industrial world. The establishment of a quality control system will engender practices to make better quality bricks. This should be considered as an industrial world argument. However, this opportunity could also be justified in the market world. The quality control system provides the brickmakers with a hallmark when they comply with the imposed quality requirements. This hallmark would add value to their bricks and hence the brickmakers with a hallmark of good quality bricks can demand a higher price for their bricks. This opportunity is also justified by two worlds and thus a composite situation (without any dispute). However, this opportunity could also become a barrier for some of the brickmakers due to the additional proceedings and requirements part of the quality control.
system, which demand a lot of time and efforts for in particular small brickmakers. This barrier and the potential emerging conflicts are discussed in the next section.

The fourth opportunity of collective marketing of bricks is justified in the market world. The cooperative would buy the bricks of her members and sell these bricks subsequently to the purchasers. This would result in a large local market share for the cooperative and means that the cooperative obtains a certain degree of control over the local brick prices. This opportunity could also create resistance from several actors. The local brick vendors will be made redundant by the launch of a collective marketing of bricks by the cooperative. The brick vendors (as actors resisting the cooperative) are discussed in the next section about barriers.

The last identified opportunity is the increase of disaster resilience. This opportunity is almost entirely justified in the civic world. Initiating Gotong Royong activities, providing recovery loans, facilitating external support and increasing the overall disaster resilience in the Lubuk Alung regency should all be justified by the civic world. These components of increasing disaster resilience emphasize and rely on collective actions of the cooperative members. However, the disaster resilience component of improving the disaster preparedness, is only justified by the industrial world. Brickmakers who are better prepared may occur less damage from a disaster and recover quicker from it. These brickmakers can thus be considered more efficient and productive because they are prepared for a disaster. However, the excessive attention of the cooperative for its disaster-affected members could create a conflict situation. The not-affected members do not agree with the attention given to the affected brickmakers and want the cooperative to return to its original tasks (e.g. provide a brick-making training and the collective marketing of bricks). The justifications from the not-affected brickmakers belong to the industrial and market worlds because the excessive attention to the affected brickmakers hampers the tasks of the cooperative and hence their ability to earn money. This possible emerging composite conflict situation should be resolved by establishing a compromise in the form of a new common higher-level principle. This higher-level principle could be ‘temporary emergency relief’, which denotes an important role for the civic world, while considering the industrial, and market worlds by emphasizing the temporary character of the compromise. In this compromise, the disaster and the damage caused by it could be qualified as objects to support the higher-level principle of ‘temporary emergency relief’.

7.1.3 Justifying the barriers

As the biggest opportunity for the brickmakers is access to capital, their main barrier is the lack of money. Without sufficient accumulated capital it will be impossible to build a cooperative. In particular the opportunity of access to capital is connected with the issue of brickmakers with a lack of capital. The
cooperative loans should be provided by means of an interaction between brickmakers who store savings in the cooperative and people who borrow this money subsequently from the cooperative. Without sufficient investments the loans cannot be granted and the cooperative cannot be build. The lack of money of the brickmakers is justified in the industrial world because the brickmakers lack the capacities to develop higher profits and accumulate sufficient capital.

The second barrier is the distrust in the former brickmakers’ cooperative board. Several brickmakers told me about rumors that the board of the 2005-2007 brickmakers’ cooperative favored themselves and certain members, e.g. in the allocation of government subsidies. However, the interviewed brickmakers who have been members of the former cooperative contradicted these rumors and even blamed other former cooperative members of disobeying the rules of the cooperative. The stories and rumors about preferential treatments decrease the confidence of people in a new cooperative. The problem of preferential treatment can be argued as a violation of the common principle for the civic world, which would emphasize that all cooperative members are equal. However, the stories and rumors about nepotism of the 2005-2007 cooperative board can also be situated in the world of opinion. Therefore, this barrier is a composite situation, without conflict between the civic world and the world of opinion.

The opportunities of collective marketing and access to capital do also raise the barrier of resisting actors. The collective marketing of bricks by the cooperative will displace the local brick vendors because they cannot compete with the large brick supply of the cooperative. The granting of cooperative loans would largely displace the local moneylenders. The local moneylenders borrow money to the brickmakers without asking any personal guarantee, but the obligation for the brickmakers to sell his bricks to the moneylender for a price below the current market value. The cooperative loans have only a small interest and are therefore more affordable for the brickmakers. Although the moneylenders and the brick vendors could attempt to resist the building of a brickmakers’ cooperative, if they are involved in the new brickmakers’ cooperative, their network and knowledge could be utilized and their cooperation could become an opportunity instead of a barrier. This opportunity would be justified in the industrial world due to knowledge accumulation and the formation of a network, both important aspects of the industrial world.

The last identified barrier is again related to an opportunity. The setting up of a quality control system could create a serious barrier for small brickmakers, due to the various additional proceedings and practices necessary to demonstrate compliance with the imposed quality requirements. This could form in particular for the small brickmakers a barrier due to their limited production and thus more efforts per brick to adopt a new system. The additional practices and proceedings could hamper the brick-making
process drastically. This barrier is therefore justified in the industrial world. So in the situation of the opportunity and barrier of setting up a brick quality control system both are justified in the industrial world. The two conflicting justifications adhere to the same world. If the justifications in a conflict situation are belong to the same world, a reality test is needed to assess which justification is the worthiest. The verdict of the reality test should be the resolution of the dispute.

The reality test for the opportunity and barrier, related to setting up of a quality control could be a pilot ‘quality control’ project. The pilot project would consist of a number of brickmakers (with distinct characteristics, e.g. a large and a small brickmaker) that start with the quality control. After a certain period the pilot project will be evaluate and the advantages and disadvantages for the productivity and efficiency of the business is assessed. However, when the reality test (i.e. the pilot project) will reveal that the (small) brickmakers become less efficient, a composite conflict situation will arise. The (small) brickmakers do not encourage the quality control system with their industrial world justification. However, the proponents of the quality control system did also incorporate a justification from the market world. According to them a branded brick would be more valuable and hence increase their profits.

7.2 Discussion and implications

At the start of this research, Build Change Indonesia had made plans to build a cooperative and I commenced the study with the idea that I could investigate and participate in the process of building a brickmakers’ cooperative in Lubuk Alung. Unfortunately, due to internal reasons at Build Change, the whole idea of building a cooperative was first diluted and later abandoned. Due to this change in Build Change’s project, my research became less relevant for the organization. More importantly, it ended up creating false expectations (of a cooperative) among the brickmakers in Lubuk Alung. However, the research did yield some interesting findings that could be beneficial for the building of future brickmakers’ cooperatives in West Sumatra.

7.2.1 Practical implications

The analysis conducted in this chapter has identified a discrepancy between the brickmakers in Lubuk Alung, who predominantly justify the building of a cooperative with the market and the industrial world, and ICA’s (2012) seven cooperative principles, which are considered to belong to the civic world. This primary finding of my research implies that any future organization (i.e. a cooperative, collective, etc.) for brickmakers’ in West Sumatra should make sure that the interests and concerns of the brickmakers are made central in its building process. This research has clearly indicated that the concerns of the brickmakers pertain predominantly to the market and industrial world. So instead of taking the ICA guidelines (belonging to the civic world) into consideration as guiding principles for the building of a
cooperative, the initiative should start with a thorough investigation and understanding of what the people want in this particular local situation. This thorough understanding of the requirements and expectations of the people in the local situation should form the basis for the building of a cooperative. As a result, this research can only provide recommendations for the building of a brickmakers’ cooperative in Lubuk Alung regency because each future cooperative should be based on an distinct set of requirements relevant to what the people want in that particular local situation.

This implication could also be interpret as an implication for top-down versus bottom-up initiatives. While organizations, like NGOs and government institutions, would predominantly rely on recommendations given by international organizations, experts or scholars, for instance the seven cooperative principles of the ICA, the beneficiaries could actually have different (and opposing) perspectives and requirements for the building of a cooperative. This study shows that top-down initiatives (for the building of a brickmakers’ cooperative) should start from the onset of the project with an interaction with the people on the ground and a transformation of the project into a bottom-up approach. The beneficiaries of the project should be allowed to take the top-down initiative and transform it into a bottom-up approach. This would imply that the Build Change should adopt and support the ideas and requirements proposed by the brickmakers in order to facilitate an interaction between the top-down initiative of Build Change and the bottom-up perspective of the brickmakers.

7.2.2 Theoretical implications for literature on cooperatives
The main finding of this research results also in some implications for the literature about small-scale producer cooperatives in Indonesia. The existing literature discuss primary the functioning of small-scale producers’ cooperatives and to a lesser extent the actual process of building cooperatives. This research has identified for the particular case of the brickmakers in Lubuk Alung regency that the preferences and requirements of the people at the ground can differ extensively with the recommendations of international organizations or experts. Literature (and research) about small-scale producers’ cooperatives in Indonesia should therefore be more focused on the actual process of building cooperatives with special emphasis on the interaction and the transformations of top-down initiatives into bottom-up approaches. In particular, the discrepancy between the generally assumed opportunities and barriers for the building of small-scale producers’ cooperatives and the actual local situation should be investigated in more detail.

7.2.3 Theoretical implications for literature on justification theory
The justification theory of Boltanski and Thévenot proved to be very suitable for investigating and assessing specific individual justifications for the building of a brickmakers’ cooperative and the identification of potentially emerging conflict situations with their possible resolutions. However, the
analysis of the invoked justifications by means of the justification theory did also yield some shortcomings of the justification theory. The conducted analysis did often yield justifications pertaining to multiple worlds. A justification pertaining to multiple worlds creates always a composite situation when a dispute with another justification arises. In such a situation, a common higher-level principle of equivalence is necessary to establish a compromise and solve the dispute. If a dispute continues after the establishment of a common higher-level of principle, a reality test should be conducted. The reality test would assess the worth of both justifications according to the new higher-level principle. This theoretical process could have been facilitated by the introduction of new worlds (e.g. a particular world consisting of characteristics of the industrial and the market world). The theory would be more valuable when it creates more room for introducing additional new worlds as a basis for justifications. The six developed worlds by Boltanski and Thévenot are made too general, making it difficult to place a justification in only one world.
Bibliography


Appendix I - List of interviews

Interviews

1. Agung – Brickmaker (January 24, 2013)
2. Candra – Brickmaker (January 24, 2013)
3. Dian – Brickmaker (January 24, 2013)
4. Angga – Brickmaker (January 24, 2013)
5. Ade – Village leader Pasie Laweh (January 29, 2013)
6. Triago – Cooperative leader (KUD II) (January 31, 2013)
7. Sumitro – Cooperative leader (KUDIII) (January 31, 2013)
8. Amatt – Brickmaker (February 11, 2013)
10. Riri – Brickmaker (February 11, 2013)
11. Sura – Brickmaker (February 21, 2013)
12. Mulia – Brickmaker (February 21, 2013)
13. Utami – Government representative of the regional Department of Industry (February 26, 2013)
14. Asmoro – Brickmaker (March 6, 2013)
15. Zeze – Brickmaker (March 6, 2013)
17. Tari – Wood vendor (April 5, 2013)
19. Rojo – Representative BPBD (April 9, 2013)
20. Candra – Brickmaker (October 9, 2012) interviewed by BCI
21. Agung – Brickmaker (October 9, 2012) interviewed by BCI
22. Fendy – Brickmaker (January 9, 2013) interviewed by BCI
23. Riri – Brickmaker (March 6, 2013) interviewed by BCI

Focus group meetings

1. Asmor, Musa & Sumitro – Brickmakers with more than two kilns (March 18, 2013)
2. Mulia, Budi, Yuli, Sukmo, Surya & Datuak – Brickmakers with less than three kilns (March 29, 2013)
Appendix II - Questionnaire

Preliminaries/ethics:
Good morning/afternoon, my name is Joep de Boer and I am a university student from the Netherlands. I am staying for three months in the Padang region to conduct research for my final Master project. The research will be about how to set up a cooperative of brick-making enterprises in order to strengthen their businesses as well as improving the brick quality by means of developing production standards and introducing new technologies. I am an independent student researcher and I do not report to government institutions or businesses. I am working together with the American NGO Build Change that supports me with its expertise, facilities and with the translations. The results of the research will be used to support the Build Change brick-making project and will be anonymously published in my Master thesis.

I would like to ask you a number of questions about the natural disasters and your view regarding the possible creation of a brickmakers’ cooperative in this area. The interview will take probably about 15 to 20 minutes. Participating in the interview is completely voluntary and you can stop or quit the interview at any time you want without providing a reason. Unfortunately, there are no resources available to provide a financial or material compensation for participating in the interview. However, by interviewing you I will bring your valuable knowledge to my Dutch university and to the NGO Build Change, which will use it to support its brick-making project. A benchmark of the eventual results of the research will be made available for all interested participants.

Do you want to participate in this interview?
Date: Name:

1a. For how long have you been a brickmaker? ..... years  
b. What is the total brick capacity of your business? ................. bricks  
c. Do you rent the land for your business? Yes No On loan from family

2. Have you ever experienced a natural disaster in this area? In which year was this?  
   Flooding Land slide Hurricane Earthquake Other

3. Have you ever been a member of a brickmakers’ cooperative? Or any another cooperative/association? Yes No Other coop/association:

4. Do you know what a cooperative is? Yes No A little bit

General definition of a brickmakers’ cooperative:  
A cooperative is a group of people who get together to meet their own needs at the lowest possible cost by forming a group where power is exercised democratically.

When you become a member of a cooperative, you become a co-owner and you earn the right to vote at general meetings. In addition, since cooperatives follow the “one member, one voice” principle, your vote carries the same weight as any other member’s vote.

There are different types of cooperatives, for instance, only for workers, consumers or producers. My research is focused on the producers’ or brickmakers’ cooperative. A brickmakers’ co-operative could be used for the following needs:  
- collective resource procurement  
- collective marketing of end products  
- providing loans or savings  
- research and/or testing of new technologies or production methods  
- procurement of collective assets (e.g. truck to deliver bricks or a mixing machine)  
- defining quality standards

5. Suppose there would be a brickmakers’ cooperative in this area. For what reason would you join this cooperative? (1st choice and 2nd choice)  
   1. Collective resource procurement  
   2. Collective marketing of end products  
   3. Knowledge sharing about best practice and standards to improve brick quality and increase production  
   4. To use a delivery truck or machines from the cooperative  
   5. To obtain a loan  
   6. To store savings  
   7. Another reason ……

6. Why would you not want to join the cooperative?  
   1. I do not want to pay the member/investment fees  
   2. I cannot pay the member/investment fees  
   3. No reasons, I want to join a cooperative  
   4. Another reason ……

7a. Do you think the brickmakers have different ideas about what the purpose for the cooperative should be?  
   Yes No I don’t know  
b. If yes, will this be a barrier for building a cooperative?  
   Yes No I don’t know

8a. Could the investment fee for becoming a member work as a barrier for setting up a brickmakers’ cooperative?  
   Yes No I don’t know  
b. Moreover, could the periodical membership fee work as a barrier for setting up a brickmakers’ cooperative?  
   Yes No I don’t know

9a. Do you think that the brick quality in the Lubuk Alung area is everywhere the same?  
   Yes No I don’t know  
b. If no, will this be a barrier for building a cooperative?  
   Yes No I don’t know
<table>
<thead>
<tr>
<th>10a.</th>
<th>Do you regularly lend money from someone?</th>
<th>Yes</th>
<th>No</th>
<th>I don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
<td>If yes, do you have to sell your bricks to this person below the market value in return for this loan?</td>
<td>Yes, ...... Rp. per brick</td>
<td>No</td>
<td>I don't know</td>
</tr>
<tr>
<td>c.</td>
<td>If yes, do you think that this person will form a barrier in the cooperative-building process?</td>
<td>Yes</td>
<td>No</td>
<td>I don't know</td>
</tr>
<tr>
<td>11a.</td>
<td>Are there any (small) issues among the brickmakers or between communities in the Lubuk Alung area?</td>
<td>Yes</td>
<td>No</td>
<td>I don't know</td>
</tr>
<tr>
<td>b.</td>
<td>If yes, will these issues form a barrier for building a cooperative?</td>
<td>Yes</td>
<td>No</td>
<td>I don't know</td>
</tr>
<tr>
<td>12.</td>
<td>What other problems or barriers do you expect in the process of building a cooperative?</td>
<td>1.</td>
<td>2.</td>
<td>3.</td>
</tr>
<tr>
<td>13.</td>
<td>Do you think that the building of a cooperative will solve your problems with access to capital?</td>
<td>Yes</td>
<td>No</td>
<td>I don't know</td>
</tr>
<tr>
<td>14.</td>
<td>Do you think that building of a cooperative will enable you to improve your production process?</td>
<td>Yes</td>
<td>No</td>
<td>I don't know</td>
</tr>
<tr>
<td>15.</td>
<td>Do you think that the building of a cooperative will help you with better (collective) selling possibilities for your bricks?</td>
<td>Yes</td>
<td>No</td>
<td>I don't know</td>
</tr>
<tr>
<td>16.</td>
<td>Are there any other opportunities, reasons or benefits for building a brickmakers’ cooperative? (kesempatan)</td>
<td>1.</td>
<td>2.</td>
<td>3.</td>
</tr>
<tr>
<td>17a.</td>
<td>Do you think that the building of a cooperative could help to speed up and facilitate the recovery process after a natural disaster?</td>
<td>Yes</td>
<td>No</td>
<td>I don’t know</td>
</tr>
<tr>
<td>b.</td>
<td>Do you think that the building of a cooperative could also help brickmakers with being more prepared for future natural disasters?</td>
<td>Yes</td>
<td>No</td>
<td>I don’t know</td>
</tr>
<tr>
<td>18a.</td>
<td>Do you think that the building of a cooperative will strengthen and expand your relations with people in and outside the brick-making community?</td>
<td>Yes</td>
<td>No</td>
<td>I don’t know</td>
</tr>
<tr>
<td>b.</td>
<td>Could this be beneficial in the recovery process after a natural disaster?</td>
<td>Yes</td>
<td>No</td>
<td>I don’t know</td>
</tr>
<tr>
<td>19.</td>
<td>Do you think that the government can provide better support for the brickmakers if they are united in a cooperative?</td>
<td>Yes</td>
<td>No</td>
<td>I don’t know</td>
</tr>
<tr>
<td>20.</td>
<td>Do you want to add a question to this questionnaire or do you have any final comments?</td>
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<tr>
<td>21.</td>
<td>Do you want to receive a brief overview of the results at the end of the research?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
Previous MSc thesis in technology and development studies