

**Temporal Migration and Community
Development in Rural Indonesia**

GUNAWAN PRAYITNO

2015

Temporal Migration and Community Development in Rural Indonesia

by

GUNAWAN PRAYITNO

A dissertation submitted in partial satisfaction of the requirements for the degree of
Doctor of Engineering

in the

DEPARTMENT OF URBAN MANAGEMENT
GRADUATE SCHOOL OF ENGINEERING
of
KYOTO UNIVERSITY

Temporal Migration and Community Development in Rural Indonesia

Copyright 2015

by

GUNAWAN PRAYITNO

Acknowledgments

All praise due to Allah for all these blessings and for orchestrating this dissertation. During my 3 years pursuing in doctoral courses at Kyoto University, this acknowledgement is the chance to express my appreciation to all who involved in making this dissertation possible.

I would like to express the deepest appreciation to my supervisor, Professor Kiyoshi Kobayashi who provided me the opportunity to join his laboratory, in which he shows the attitude and the substance of genius. I have been amazingly fortunate to have an advisor who gave me the freedom to explore on my own and at the same time the guidance to recover when my steps faltered. His patience and support helped me overcome many crisis situations and finish this dissertation.

I cannot find words to express my gratitude to Associate Professor Kakuya Matsushima for his guidance and mentoring. This dissertation would not have been possible without his guidance and helps in which he always shows his daily patience, understanding as well as persistent during the preparation and completion of this research. With his patient to support me both in academic research and in daily life in Kyoto, many difficulties seemed like lighter after discuss and get feedback from him.

My deepest appreciation goes to Assistant Professor Masamitsu Onishi and former Assistant Professor Mamoru Yoshida for their support and encouragement during my study. My gratitude goes to Ms. Hayeong Jeong for her warmth heart and encouragement throughout my preparation of first survey. My special thanks to Ms. Aya Fujimoto (former secretary) and Ms. Inoue for continuous support and kindness.

My thankful and indebtedness also to all members of Planning and Management System Laboratory for their friendship, kindness and sharing in deepen our understandings and expand our knowledge together, especially for Mr. Nishimoto and Mr. Mizuta. Too many to name them here, and a great thank you to you, All.

I am also very thankful to Dr. Ismu Rini Dwi Ari, my colleague in Brawijaya University, who recommend me to enter this Laboratory. And I also very thankful Dr. Prawira F. Belgiawan and his wife Ms. Zavitri Citra Wardhani, for their helps.

I am especially grateful to the Ministry of Education of Indonesia in which I granted my scholarship to pursue this doctoral program. My appreciation goes to all

my dear colleagues in Brawijaya University, particularly in Regional and Urban Planning Department. My great pleasure goes to all Indonesian friends in Kyoto as well as Japanese neighbors around our apartment for the warmth of their hearts during my stay in Japan.

Unforgettable thanks to the surveyor team—my great students at Regional and Urban Planning Department under excellent coordination of my colleague Mr. A.R. Taufik Hidayat. Without their extraordinary field survey and continuous support this research will never reach its goal.

Finally, without my wife Amalia, I would not have managed to pursue this Ph.D. With boundless love, she supported and encouraged me, and patiently endured the ups and downs of my graduate studies; and also to our beloved children Fathiya, Faiz, Nisa and Abdullah for their endless love and support. I cannot thank my parents and my parent in law enough for their unconditional acceptance and support.

Dedicated to my parents, my parents in law, my wife Amalia and my beloved
children Fathiya, Faiz, Nisa and Abdullah

Abstract
Temporal Migration and Community Development
in Rural Indonesia

by
Gunawan Prayitno
Doctor of Engineering
Kyoto University

The agriculture sector supports the livelihood of millions of Indonesians. With more than 60 percent of the population living in rural areas, farming remains the main occupation and source of income for much of the country's population. The share of agriculture in Indonesia's overall economic activity has been declining for several decades, as structural shifts in the economy have occurred away from agriculture oriented activities toward a service driven economy. In 2013, this sector employed around 49 million Indonesian individuals, which represents 35 percent of the total Indonesian labour force. Although in absolute numbers the agricultural workforce keeps growing, its relative share of the total Indonesian workforce has declined significantly from 55 percent in the 1980s to 45 percent in the 1990s and 35 percent in 2013 (ILO, 2013). Only during the Asian Financial Crisis in the late 1990s this share grew significantly because unemployment in both the industry and services sector was absorbed by the agriculture sector (mostly informally).

The decrease of an agricultural sector to absorb the labor force in Indonesia has an excess to the increasing number of unemployment, especially in a rural area with the characteristic of widespread poverty, underemployment, and surplus of low-skilled labor. Labor force tries to find jobs in all sectors, including working as a temporary migrant worker abroad. Working abroad is one way to find job for rural inhabitants, especially for young generation. Temporal migrations are used as strategy to allocate labor resources for increasing their income and reducing the risks.

Before choosing the decision to migrate, the households or potential migrants will look at the opportunities of jobs in destination countries. The potential migrants or households will find out their relatives or friends who are working abroad or out of the village to reduce the risk. These relations are known as migrant network or social ties in migration literature, in line with the research from Lin, Cook and Burt 2001; and Taylor 2006. They found that the candidate of migrants may obtain direct or indirect benefit, which can reduce the risk and cost at the time of relocation and job seeking from the relation with former or active migrant.

This also applies particularly with the ties between migrant and family/relative/kinship members (Massey et al. 1987; and Davis et al 2002).

The main objective of this dissertation is to investigate the relation between social capital as social ties and migration in rural areas. We develop our first hypothesis as: communities and households with higher social capital will send their family members as migrant workers. The second hypothesis is that communities and households with higher social capital will not send their family members as migrant workers. To prove which hypothesis is suitable, we develop theoretical model about investment in social capital and decision to migrate (or stay) and analysis data from respondents' interview as empirical proof.

The whole dissertation consists of 7 chapters in which the following paragraphs explain each chapter in more detail.

Chapter 1 describes basic idea of the research about social capital and migration decision, research objectives, rationale of the research, research methodologies as well as contribution of the research to the body of knowledge. Final subsection of the chapter describes the structure of dissertation. In this chapter we explain our motivation to conduct this research, the hypotheses, the results and findings, as well as the novelty of our research. This research attempts to develop theory as well as analytical model of household's decision choice and social ties as an essence in social capital approach.

Chapter 2 investigates literature review about social capital formation constructed by the concept of social ties and place attachment. First, we explain the concept of social capital as a wide concept. The investment in social capital which is as social interaction among individuals and the social capital formation explained in this chapter. The concept of social ties was explained with strong ties (bonding social capital) and weak ties (bridging social capital). A strong tie is relation between individual and his/her close friend or relative, and weak ties are the relation with community or not close friends and families. Second, we explain the concepts of migration, migration network, and migration and social capital.

Chapter 3 portrays results of household questionnaire survey covering six demographic characteristic of the households (migrant and non-migrant household), issues on migration and relation to their neighbors and living environment. We measured the relation between the respondent and their village-their neighbors by the questions in the questionnaire survey, and we investigate the relation between social capital and migration decision by using questions regarding to the respondents' activities to the community activities.

Based on chi square analysis we might explains the relation between individuals characteristic attributes and the formation of social capital. We designed the constructs of social capital formation from 12 questions in the questionnaire survey, which indicates latent constructs (unobserved variables). The results of analysis show that from six attributes,

income and type of migration has significant value in the chi square test, and it indicates that income and type of migration has relation to the formation of social capital. Another attributes such as family members and occupation has significant value only with some activities and attribute's education, and gender has no relation. The results indicate that income has a significant effect to decision choice (migrate or stay).

The data also shows that for migrant respondents, the decision choices (migrate or stay) were at the time they are growing adult. Migrant respondents have three stages of life, starting from child, adult, and old. They invest in social capital and human capital when being child, and choose to migrate when growing adult and return back when getting old. If they choose to migrate they should return back after completing the contract duration. From this finding, we developed theoretical model of migration decision choice.

Chapter 4 explains the process of developing the model. First, based on the previous chapters in where the current condition of migration decision in rural area explained, we developed the basic framework of the model. According to the clarification process that resulted from data collection and interview process, we formulated the problem and develop the basic model theoretically. In the model we emphasized the decision of individual in young, adult and old generation through the theory of overlapping generation. This model explained how the relation between investment in social capital and migration decision between individuals. The model show that we can prove second hypothesis: communities and households with higher social capital will not send their family members as migrant workers

Chapter 5 is the first of two empirical evidence chapters. In this chapter, we use data only from migrant household respondents. This chapter examines the relation between social capital and migration using psychological concept. Social capital explained as latent variables such as sense of community, sense of place and neighboring. This constructs will determine the level of social capital (higher or lower). Beside latent variables we will make relation it constructs with observed variables to know the relation. Observed variables consist of demographic attributes, respondent values and belief to the village and neighbors and respondents activity in the community activities.

The result shows that our findings support our first finding in chapter 3. By using a structural equation model (run in AMOS software), the household income, type of migration and education might have effect to latent variables that we have proposed. Social capital formations are shown by the significant values in statistical evidence. The level of social capital measured using observed variable the duration of work, and by using path in AMOS software we found the significant value. It indicates that the level of social capital has effect to the decision to migrate. Higher social capital tends to send more family members as

migrant workers. In this chapter we able to proof our first hypothesis: communities and households with higher social capital tend to send their family members as migrant workers.

Chapter 6 develops general methodology to integrate an observed exogenous variable, latent variables and discrete choice of migration. The resulting methodology is an integration of latent variables model, to operationalize and quantify unobservable variables with discrete choice methods. The methodology incorporated indicators of observe variables (six demographic attributes data: income, education, type of migration, gender, occupation, and family members) and indicators of latent variables (ties to neighbors, ties to community and sense of place) provided by responses to survey questions to aid in estimating the model.

Using structural equation model that we employed in Mplus program, the result of our study shows that ties to community positively have a significant impact to the decision of respondents (migrate or not). Besides, education as observed variable directly influences the migration decisions. It seems that higher level of education have impact on migration decision. Due to the uncertainty in the host country for the potential migrant it was better to have higher education for them. We have confirmed our first hypothesis that households with higher social capital send their family members as migrant workers. Our current model so far could explain the relation between social capital and migration decision choice.

Contents

Abstract	i
Contents	v
List of Figures	viii
List of Tables	x
1. Introduction	1
1.1. Background	1
1.2. Rationale of the Research	5
1.3. Objective of the Research	6
1.4. Research Methods	7
1.5. Contribution of the Research	8
1.6. Structure of the Dissertation	8
Bibliography	13
 2. Literature Review	 15
2.1. Introduction	15
2.2. Understanding Social Capital	16
2.2.1. Recent Refinement	19
2.2.2. Level of Social Capital	20
2.2.3. Bridging (weak ties) and bonding (strong ties)	22
2.2.4. Place attachment	24
2.2.5. The Formation of Social Capital	25
2.3. Migration and Social Capital	26
2.3.1. Migration	26
2.3.2. Migration and Social Capital	28
2.4. Summary and conclusions	32
Bibliography	34
 3. Migrant and Non Migrant Characteristic	 39
3.1. Introduction	39
3.2. The Field Survey Design	42
3.2.1. Sample selection and number of respondents	43
3.2.2. List of Questioner	44
3.2.3. Brief Description of Research Area	44

3.3. Demographic Attributes	48
3.3.1. Migrant Households Respondents	48
3.3.2. Non Migrant Households	56
3.3.3. The Difference characteristic Between Migrant and Non Migrant	60
3.4. Data related to Social Capital Measurement	63
3.4.1. Migrant Respondent about their living environment and neighbors	64
3.4.2. Migrant Respondent activity in the community activities	66
3.4.3. Descriptive Statistics	69
3.4.4. Non Migrant Respondent opinion about their living environment and neighbors and their activity in community activities	75
3.5. Summary and Conclusion	77
Bibliography	72
4. Social Capital and Temporal Migration Decisions	83
4.1. Introduction	83
4.2. Overlapping Generation Model	87
4.3. The Model	89
4.3.1. Assumptions	89
4.3.2. Agents Behavior	89
4.3.3. Equilibrium	93
4.4. Social Tie and Migration	94
4.5. Implementation	96
4.6. Summary and Conclusions	96
Bibliography	98
5. Social Capital and Migration based on Duration of Contract	100
5.1. Introduction	100
5.2. Basic Idea	102
5.3. Description of An Empirical Case	105
5.3.1. Determination of the Sample	105
5.3.2. Descriptive Statistic	106
5.3.3. Explanatory variables	111
5.4. Measuring Social Capital	114
5.4.1. Principal Component Analysis	116
5.4.2. The Model	117
5.4.3. Estimation of Model	117

5.5. Summary and Conclusions	122
Bibliography	113
6. Migration Decision in Rural Area	126
6.1. Introduction	126
6.2. Social Capital Formation	129
6.3. Method	130
6.3.1. Model Development	132
6.3.2. Framework and Definition	132
6.4. An Empirical Research	133
6.4.1. Description of the Survey	134
6.4.2. General Description of Rural Area	136
6.5. Result	136
6.5.1. Lesson Learn from the Previous Chapter	136
6.5.2. Descriptive Statistic	137
6.5.3. Explanatory variables	143
6.5.4. Principal Component Analysis	145
6.5.5. Integrated Choice and Latent Variables Analysis	146
6.5.6. Estimation of The Model	147
6.6. Policy Implication	152
6.7. Summary and Conclusion	153
Bibliography	155
7. Conclusions and Future Research	158
7.1. Conclusions	158
7.1.1. Chapter 1	159
7.1.2. Chapter 2	159
7.1.3. Chapter 3	160
7.1.4. Chapter 4	161
7.1.5. Chapter 5	162
7.1.6. Chapter 6	163
7.2. Future Research	153
Bibliography	164
Appendix	167

List of Figures

Figure 3.1. Land Use of Malang Regency	45
Figure 3.2. Indonesian and East Java Province Location	46
Figure 3.3. Malang Regency	46
Figure 3.4. Land Use Map of Arjowilangun village	47
Figure 3.5. Household Income without Remittance	49
Figure 3.6. Household Income with Remittance	50
Figure 3.7. Whose Migrate	51
Figure 3.8. The Sex Identity of Migrant Respondents	52
Figure 3.9. The Size of Family (show the number of respondents)	52
Figure 3.10. Occupation before Migrate	53
Figure 3.11. Occupation after Migrate	54
Figure 3.12. The Level of Education of Migrant Workers	54
Figure 3.13. Status of Migrant's	55
Figure 3.14. The contract duration	56
Figure 3.15. The Non Migrant Household Income	57
Figure 3.16. The Family Members of Non Migrant Household	58
Figure 3.17. The Occupation of Non Migrant Households	59
Figure 3.18. Educations Level	59
Figure 3.19. Household income without migrant income	60
Figure 3.20. Household income with migrant income	61
Figure 3.21. Household Education Background	62
Figure 3.22. Family Members	63
Figure 3.23. Social Capital construct from questions	65
Figure 3.24. Activity of Respondent on Community Activity	68
Figure 3.25. The relationship between education and Y5	71
Figure 3.26. The relation between income and Y11	72
Figure 3.27. The relation between type of migration and Y1	72
Figure 3.28. The relation between types of migration and ACT 4	74
Figure 3.29. The relation between family members and ACT 3	74
Figure 3.30. The relation between types of gender and ACT7	75
Figure 3.31. Value and Believe to their living environment (village) and neighbors	76
Figure 3.32. Activity of Respondent on Community Activity	77

Figure 4.1. The relation between $f(e_Y)$ and $g(e_Y)$	94
Figure 5.1. Four dimensions of social capital	104
Figure 5.2. The relationship between education and Y5	108
Figure 5.3. The relation between income and Y11	109
Figure 5.4. The relation between type of migration and Y1	110
Figure 5.5. Household Income plus Remittance	111
Figure 5.6. Gender and Type of migration	112
Figure 5.7. Education Background of Respondents	113
Figure 5.8. The duration of contract	114
Figure 5.9. The Model	121
Figure 6.1. Framework for integrated choice and latent variables model	133
Figure 6.2. The relationship between income and Y12	140
Figure 6.3. The relationship between Occupation and Y10	141
Figure 6.4. The relationship between Family Members and Y1	142
Figure 6.5. The relationship between the level of education and Y9	143
Figure 6.6. Structural Equation (SEM) Model 3	150

List of Tables

Table 1.1. Deployment of Indonesian Workers Abroad by Destination Countries	2
Table 3.1. The Summary of Questionnaire Survey	44
Table 3.2. Chi square test (Pearson value) between demographic attributes and 12 questions related to values and belief to the village and neighbors	70
Table 3.3. Chi square test (value Pearson chi square) between Attributes Data and Activities in the community (activities 1-7)	73
Table 5.1. Chi square test (Pearson value) between demographic attributes and 12 questions related to values and belief to village and neighbors	108
Table 5.2. Chi square test (value Pearson chi square) between Attributes Data and Activities in the community (activities 1-7)	111
Table 5.4. Rotated Factors Loadings	116
Table 5.5. Structural equation modeling	119
Table 5.6. SEM Model Estimation, in brackets standardized effects	121
Table 6.1. Chi square test (Pearson value) between demographic attributes and 12 questions related to values and belief to village and neighbors	138
Table 6.2. The chi-square test for demographic attribute in dummy variable	144
Table 6.3. Rotated Factors Loadings	146
Table 6.4. Structural equation modeling	149
Table 6.5. SEM Model Estimation and Standardized Effects (SE)	152

Chapter 1

INTRODUCTION

1.1. Background

Nowadays we live in the world without any border in globalization era. Even in every region or country could easily access another country or region at the same time because of technology development. In the economics field, we are like a global village without any border due to the free trade area agreements. Economic globalization is facilitated by the application of advanced information and telecommunication facilities, elimination of artificial barriers through trade liberalization and financial deregulation, which also permits the creation of complex webs of financial products and emergence of financial conglomerates offering various services. Thus, a movement from one country to another country such as: the movement of labor, good, capital and technology can happen easily.

Related to the phenomenon, the movement of labors from one country to another country is a conspicuous trend due to the fact that it happens every year. The movement of labors can be seen in various parts of the world and they are commonly known as migrant workers. Indonesia, as one of developing countries, not only sends migrant workers but also accepts workers coming from overseas, technology and

capital. The term migrant worker refers to a person who enters a country (in which he or she is not a citizen with or without valid entry and work permits to be gainfully employed in various economic sectors.

In the recent years, Indonesian migration has steadily decreased. The largest decrease, in 2012, coincided with the moratorium to stop migrant workers to the Middle East countries, especially to Saudi Arabia. According to The Agency for the Placement and Protection of Indonesian Migrant Workers (BNP2TKI) (2014), the number of migrant workers from Indonesia has been decreasing over the years, from 748,825 in 2008, to 512,168 in 2013 (Table 1). In addition, the remittances sent by these workers according to Indonesian Central Bank (Koran Jakarta, 2014), amounted to the USD 10.9 billion in 2013, increasing from USD 6.9 billion in 2012. It became an important factor in the country's renewed economic growth in the past few years. According to a BI survey report, the remittance inflow has contributed to Indonesia's balance of payment in the amount of 27 per cent of all services, income, and current transfer value (IMO, 2010).

Table 1.1. Deployment of Indonesian Workers Abroad by Destination Countries

	2008	2009	2010	2011	2012	2013	Total
Malaysia	255,809	123,886	116,056	134,108	134,023	150,236	914,118
Taiwan	78,263	59,335	62,048	73,498	81,071	83,544	437,759
Saudi Arabia	230,702	272,676	228,890	137,643	40,65	45,394	915,305
United Arab Emirates	38,478	39,614	37,337	39,857	35,571	44,505	235,362
Hong Kong	39,714	32,417	33,262	50,283	45,478	41,769	242,923
Singapore	28,673	33,077	39,623	47,781	41,556	34,655	225,365
Kuwait	28,404	22,894	563	2,723	2,518	2,534	59,636
Others	48,782	48,273	58,024	95,188	113,737	109,531	473,535
Total	748,825	632,172	575,803	581,081	494,609	512,168	3,504,003

Source: The Agency for the Placement and Protection of Indonesian Migrant Workers (BNP2TKI), 2014

The magnitude of this migration result should be utilized by the Indonesian Government to build the region or rural area. Due to the different types of other

capital sources, the remittance received by the families is directly utilized to drive the economy in the family and village. In other words, the migration strategy is a way out for the family in the village to improve its financial capabilities by diversifying income not only from the agricultural sector.

In the context of Indonesia, individual migration is generally decided by a household. The family will decide who is among the family members going to work as migrant workers due to low income in the family in agricultural sector and difficulty in obtaining credit access. The family strategic migration-remittance to enhance land purchasing ability, accumulate capital, buy productive assets and other consumptive goods. Migration by one of the members of family serves as an investment to help the family to maintain its income.

Furthermore, migration occurs when economic factor exists as the result of social ties between the potential of worker and migrant worker who has already worked abroad or out of village. In return to this, the candidate of migrants may obtain direct or indirect benefit which can reduce the risk and cost at the time of relocation and job seeking (Lin, Cook and Burt 2001; Taylor 2006). This also applies particularly with the ties between migrant and family/relative/kinship members (Massey et al. 1999).

With the presence of social ties, an individual may mobilize his/her social capital to obtain valuable information, moral and material supports, which will reduce the cost and risk during migration. As the result, the individual that owns social capital will be more likely to do migration than that without social capital. The present study is provided to disclose the correlation of social capital and willingness or decision made by family to migrate or not.

People gain access to social capital through membership in interpersonal

networks and social ties, and then convert them into other forms of capital to improve or maintain their position in society (Bourdieu, 1986 and Coleman, 1988). Portes and Sensenbrenner (1993) point out that social capital may have negative as well as positive consequences; theorists generally emphasize the positive role it plays in the acquisition and accumulation of other forms of capital, an emphasis that has been particularly strong in migration research. However, in assessing the benefits of migration, the issue of the invisible and non-monetary social cost remains largely unrecognized as part of the inevitable “cost” that migrants have to pay in exchange for the prospect of a better life for their families.

Thus, some questions related to this concern emerge: Why do some families persuade one or more member of family to migrate, while others don't? Is such choice of migration only based on the influence whether or not to migrate? It is important to conduct investigation related to the correlation between migration and social capital. Here, we formulated two hypotheses; first hypothesis is communities and households with higher social capital tend to send their family members as migrant workers. In our previous study found that individuals relation between potential migrant and former migrant increase the probability to move abroad or region (Prayitno et al, 2014). There are some research on social capital and migration where it is found that social ties among community members and trusts exacerbate migration. Migrants maintain strong ties with their families and return periodically to their home areas (Lu, 2010). Excepting for a strong relationship to the family, the prospective migrants have a strong relationship with prior migrants. So, migration is often slow at the beginning, but increases rapidly once it has begun (Dijk, 1997). Palloni et al (2001) explains about the relation of migration and family network

where the family with higher level of social capital (network ties) among siblings tends to send the members of family as migrant workers.

The second hypothesis is communities and households with higher social capital will not send their family members as migrant workers. The second hypothesis base on our investigation in study area, which is the respondents who did not want to migrate because he has high level of social capital with his family and close friends. Why they did want to move, first we found that they have strong preferences for staying near to family and friends. Second, the likelihood that any individual moves declines with his or her attachment to a region. Studies of out-migration, for example, have found negative relationships between the probability of moving and whether an individual's parents and friends live in the region (Speare et al., 1982) and study from Morrison cited on Land (1969). Morrison as cited on Land (1969) found that the probability of an individual migrating diminishes as his “duration status” or “cumulated length” increases.

1.2.Rational of The Research

Many countries, particularly the developing country, employ local and international migration strategies as a means to reduce number of unemployment and to increase income for the society. In Indonesia, many studies have been conducted in connection with the economic impact of such migration. Although there are so many researches concerning labor migration (particularly migration to overseas) conducted by Hugo (1995), Tirtosudarmo and Romdiati (1998); Mantra and Keban (1999); or Eki (2002), that is, by deeply analyzing both primary and secondary data, none of them specifically focused on problem of migration decision making based on social aspect.

This condition has motivated us to propose a theoretical model of social capital and migration, and check with some empirical evidence. In academic point of view, this research can be considered as one appropriate contribution for explaining the relation between social capital and migration in Indonesia, where such framework can be adopted and implemented in other similar settings in other locations.

We found that this research distinguishes among other researchers' works, particularly in how it incorporates the concept of social capital and how the relation migration decision. Another thing is its attempt to develop a theoretical model from economics point of view that can be considered as a contribution to the field of public economics, especially in the social science theory.

1.3.Objective of the Research

The main objective of the dissertation is to investigate the relation between social capital and the decision choices (migrate or stay). First, we developed theoretical model of the decision choices (migrate and stay) and social capital investment by using overlapping generation model. Second, the measurement of its relation was proved by structural equation model (SEM) with respect to empirical research on typical pocket migrants in a rural area in Indonesia.

We would like to integrate between latent variables of social capital and discrete choice model concept for the respondents' decision whether to migrate or not. We integrated choice and latent variable (ICLV) models which merge classic choice models with the structural equation approach (SEM) for latent variables. Latent variables as construct of social capital consist of ties with neighbors, ties with community and sense of place.

1.4. Research Methods

To achieve the above objectives, previous studies in various fields are reviewed. Moreover, data on social capital constructs are gathered twice from respondents in rural area in Indonesia. The field survey was conducted in two phase (November 2012 and February 2014), whereby the main goal is to investigate social capital level by using questions in questionnaire survey as indicator for latent variables and observed variables. The first type of questions is related to the values and beliefs to the living environment (village) and neighbors. Respondents answered on a 5 point Likert scale for questions measuring the social capital level from the questions. Mainly three construct of social capital formation were measured, such as ties with community, ties with neighbors, and sense of place. The second type of questionnaire is the activity of respondents in the community activities, respondents answered whether they participate or not. The third type of questionnaire is related to individual characteristics such as income, education, occupation, gender, age and some characters related to migrant (type of migration, duration of contract). We set the second and third types of questionnaire as observed variables.

Methods used for this research can be explained as follows. First, we investigated the problem based on the issues we obtained in the study location, regarding migration decision, and what the relation with social capital. Second, we collected information as well as conducted interview to clarify our hypothetical problem statement. Further, we conducted literature review to understand the concept from theoretical point of view as well as to survey the related works in the similar topic. The purpose is to capture important theoretical insights about the model of household migration decision and the relation with social capital.

Based on such assumptions, we developed a theoretical model to describe the relation between social capital and migration decision by using overlapping generation theory. Finally, for all gathered data, statistical analysis was conducted and a main tool use Structural Equation Modeling (SEM).

1.5. Contribution of The Research

The research attempts to contribute in application social capital concept on the household decision. We develop theoretical model by using overlapping generation model theory. The present study aims to build selection construct of social capital as latent variable and its relation with household decision in structural equation model. On top of that, the study may enrich research and theoretical model in migration decision in broader discipline in technical area and social science, as well as empirical study. In addition, the results may bring out probability to develop better policy concerning migration and particularly in case of less develop country (LDC).

1.6. Structure of Dissertation

This dissertation is structured into 7 (seven) chapters. Chapter 1 starts with introduction, Chapter 2 continues with literature reviews on related subject understudy. Afterwards, Chapter 3 follows with discussion on migration and social capital relation in host country. Chapter 4 focuses on theoretical model development of social capital and human capital investment and the relation with migration decision. Then Chapter 5 provides the relation between social capital and migration decision in structural equation model. Chapter 6 continues with empirical analysis on the relation between social capital and migration decision, Indonesia as case study,

using completed data from migration and non migrant household respondents. The dissertation is ended with conclusion and recommendation in Chapter 7. The summary of the aforementioned chapters are as follows:

1.6.1. Chapter 1

This chapter describes the basic idea of the research about social capital and migration decision, research objectives, rationale of the research, research methodologies as well as contribution of the research to the body of knowledge. This research attempts to develop theory as well as analytical model of household's decision and social ties as an essence in social capital approach. Thus, the research presented in this dissertation may enrich research theory and model in vary disciplines covering engineering and social science, as well as empirical research whereby the result will bring possibility for development better policy in rural development, particularly in case of developing countries.

1.6.2. Chapter 2

In this chapter, we try to investigate the literature review about social capital formation constructed by the concept of social ties and place attachment. First, we explain the concept of social capital as a wide concept. The investment in social capital as social interaction among individuals and the social capital formation are explained in this chapter. The concepts of social ties are explained with strong ties (bonding social capital) and weak ties (bridging social capital). A strong tie is relation between individual and his/her close friend or relative, and a weak tie is relation with community or not close friends and families. Social capital is used to measure how these relationships occur; whether higher social capital will motivate people to work abroad or not.

Second, we explain the concepts of migration, migration network, and migration and social capital. Besides, this research attempt to develop theoretical model based on the decision choice of respondents about investment of social capital, human capital and the relation with decision choice (migrate or stay) based on the theory of overlapping generation model.

1.6.3. Chapter 3

Chapter 3 portrays the results of household questionnaire survey covering six demographic characteristic of the households (migrant and non-migrant household), issues on migration and relation to their neighbors and living environment. We measured the relation between the respondent and their village-their neighbors by the questions in the questionnaire survey, and we investigated the relation between social capital and migration decision by using questions regarding the respondents' activities to the community activities.

Based on chi square analysis, we might explain the relation between individuals characteristic attributes and the formation of social capital. We designed the constructs of social capital formation from 12 questions in the questionnaire survey, which indicate latent constructs (unobserved variables). We measure the relation between individual characteristic and the feeling of respondent to their village and neighbors, and the relation between individual characteristic and the respondents' activity in community activities.

1.6.4. Chapter 4

In contrast with the previous chapter as well as the next chapters, the discussions here are focusing on the economic model of social capital investment. It emphasizes on individual behavior decision between investing in social capital or in human

capital and the relation with migration decision.

Chapter 4 explains the process of developing the model. First, based on the previous chapters where the current condition of migration decision in rural area is explained, we developed the basic framework of the model. According to the clarification process resulted from data collection and interview process, we formulated the problem and developed the basic model theoretically. In the model we emphasized the decision of individual in young, adult and old generation through the theory of overlapping generation. This model explains how the relation between investment in social capital and human capital and how it relation with migration decision.

1.6.5. Chapter 5

After develop theoretical model in Chapter 4, **Chapter 5** is the first of two empirical evidence chapters. In this chapter, we use data only from migrant household respondents. This chapter examines the relation between social capital and migration using psychological concept. Social capital is explained as latent variables such as sense of community, sense of place and neighboring. This constructs will determine the level of social capital (higher or lower). Beside latent variables, we will relate it to observed variables to know the relation. Observed variables consist of demographic attributes, respondent values and belief to the village and neighbors; and respondents activity in the community activities.

We employed structural equation model (SEM) based on the data from Chapter 3, to calculate the relation between social capital and how the impact to activities in community. SEM is multivariate regression in which the response variable in the regression equation may become predictor in another equation (Schumacker and

Lomax, 2010). AMOS Software could calculate the relation among construct of social capital as latent variables and observed variables. In this chapter, we calculate the level of social capital with the value of significance to observed variable duration of contract.

1.6.6. Chapter 6

Chapter 6 develops general methodology to integrate an observed exogenous variable, latent variables and discrete choice of migration. The resulting methodology is an integration of latent variables model, to operationalize and quantify unobservable concepts with discrete choice methods. The methodology incorporated indicators of observe variables (six demographic attributes data: income, education, type of migration, gender, occupation, and family members) and latent variables (ties to neighbors, ties to community and place attachment) provided by responses to survey questions to aid in estimating the model.

We did the calculation with Mplus software (Muthén and Muthén 2012) to measure this relation. The different between this chapter and chapter 5 is, in this chapter, we integrate the framework of choice and latent variable's model. The results of calculation indicate that community and household with higher social capital tends to send the family members as migrant workers. From this result we can conclude which is hypothesis match with this study.

1.6.7. Chapter 7

This dissertation is ended with concluding remarks in **Chapter 7**. The chapter summarizes all the result in preceding chapters and notes the limitations of the study. In the end, the chapter highlights potential ideas for future research on the same area of study.

Bibliography

- Bourdieu, P. 1986. "The Forms of Capital." Pp. 241–58 in *Handbook of Theory and Research for the Sociology of Education*, edited by John G. Richardson. New York: Greenwood Press.
- Coleman, J., S. 1988. 'Norms as Social Capital', in Gerard Radnitzky and Peter Bernholz (eds), *Economic Imperialism: The Economic Approach Applied Outside the Field of Economics*, New York: Paragon House Publisher, 133-55.
- Eki, Ayub,T., 2002. *International Labour Migration from Eastern Flores Indonesia to Sabah Malaysia; A Study of Pattern, Causes and Consequences* Unpublish Ph.D. Disertation, Adelaide: The University of Adelaide.
- Hugo, Graeme.J.,1995."International Labour Migration and the Family: Some Observations from Indonesia , Asian and Pasific Migration" *Journal*, 4 (2-3): 273-301.
- International Organization of Migration (IOM), 2010. *International Migration and Migrant Workers' Remittance in Indonesia*. IOM Press, Philipines
- Land, Kenneth C. *Duration of Residence and Prospective Migration: Further Evidence*. *Demography*. Vol. 6, Number 2. 1969.
- Lin N, Cook K, Burt RS, (editors). 2001. *Social Capital: Theory and Research*. Hawthorn, NY: Aldine de Gruyter.
- Mantra, K., and Keban Y.T. 1999. *Mobility Indonesia Workers in Malaysia: Case Study East Florest, Central Lombok, and Bawean Island*. Yogyakarta; Center for Popultaion Research, Gadjah Mada University.
- Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A. & Taylor, J. E. 1999. *Worlds in motion: Understanding international migration at the end of the millennium*, Oxford, Oxford University Press.
- Muthén, L.K. and Muthén, B.O. (2012). *Mplus User's Guide*. Seventh Edition. Los Angeles, CA: Muthén & Muthén.
- Palloni, Alberto., Douglas S. Massey, Miguel Ceballos, Kristin Espinosa, and Michael Spittel. 2001. *Social Capital and International Migration: A Test Using Information on Family Networks*. *American Journal of Sociology*, Vol. 106, No. 5. March 2001. p. 1262-1298
- Placement and Protection of Indonesian Migrant Workers (BNP2TKI), 2014. Accessed from <http://www.bnp2tki.go.id/>, in November 15, 2014
- Portes, A., and Sensenbrenner, J., 1993. *Embeddedness and Immigration: Notes on the Social Dynamics of Economic Action*. *American Journal of Sociology*, Volume 98, Number 6, pp. 1320-1350.

- Prayitno, G., Matsushima K., Kobayashi K., Jeong H. 2014. Social Capital and Migration in Rural Area (A Case of Malang Regency, Indonesia). Chapter 8. Book: Social Capital and Development Trends in Rural Areas. Vol 9. MARG (Marginal Area Research Group), Kyoto
- Speare, A., Frances K., and Ward K.. 1982. The Influence of Socioeconomic Bonds and Satisfaction on Interstate Migration." *Social Forces* 61:551-574.
- Tirtosudarmo, R., and Haning, R. 1998. A Need Assessment Concerning Indonesian Women Migrant Workers to Saudi Arabia. Jakarta: Center for Population and Manpower Studies. Indonesian Institute of Sciences. (Final Draft)
- <http://m.koran-jakarta.com/?2921-optimal-kan-pangsa-pasar-tki>, Accessed November 15, 2014

Chapter 2

LITERATURE REVIEW

2.1.Introduction

In the context of Indonesia, individual migration is in general a decision made by a household. It is the family to decide who, among the family members, will work as migrant workers. This is due to low income in the family in agricultural sector and difficulty in obtaining credit access. The family strategic migration-remittent to enhance land purchasing ability, accumulate capital, buy productive assets and other consumptive goods. Migration by one of the members of family serves as investment to help the family in maintaining its income.

However, before chooses the decision to migrate, the household or potential migrant will look for opportunities of jobs in destination countries. The potential migrant or head household will find out their relatives or friends who worked abroad or out of the village to reduce the risk. These relations know as migrant network or social ties in migration literature, in line with the research from Lin, Cook and Burt 2001; and Taylor 2006. They found that the candidate of migrants may obtain direct or indirect benefit which can reduce the risk and cost at the time of relocation and job seeking from the relation with former or active migrant. This also applies particularly

with the ties between migrant and family/relative/kinship members (Massey et al. 1987; Davis et al 2002).

With the presence of social ties, an individual may mobilize the available social capital in him/her to obtain valuable information, moral and material supports, which will reduce the cost and risk during migration. As the result, the individual that owns social capital with other migrants will be more likely to do migration than that without social capital. The study is attempts to find the relation between social capital and decision choice made by family or individual to migrate or stay.

We start this literature review by explaining social capitals. First, we explained about the wide concepts of social capital, the definition, recent refinement and the formation of social capital. Second, we scrutinize the concept of migration, migrant network and the relation of social capital and migration. Lastly, on the summary, we explain the relation between this chapter with the others chapter of this dissertation.

2.2.Understanding Social Capital

Within a decade, a number of citations in the Web of Science in social capital increased dramatically from 2 in 1991 to 220 in 2001 (Elinor Ostrom and TK. Ahn, 2003). Using “social capital” as a key word in Google Scholar now suggests over 3,430,000 articles or documents contain the phrase. Topics of social capital have a very wide range, covered in the social sciences as a whole, from economics, organizational sociology to political science. As a result, varied definition has been given to drawn the notion of social capital.

There are two sociologists associated with the re-emergence of social capital during 1980 through the efforts to define social capital. These authors were French

sociologist, anthropologist and philosopher Pierre Bourdieu (1980, 1986), and American educational sociologist James Coleman (1988, as cited in Castiglione, Van Deth and Wolleb, 2008). Both authors positioned social capital closer to the writings of Loury (1977), with respect to individual linkages which facilitate positive outcomes, as opposed to Jacob's (1961) writings, where social capital is described as beneficial at a community and societal level.

(1) Bourdieu, 1986

Bourdieu had published on social capital in Europe as early as 1980. It was not until his work was translated into English in 1986 that it came to the attention of Anglophone academia. Bourdieu (1986) defined social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition—or in other words, to membership in a group”.

To Bourdieu, social capital comprised of the pool of resources which an individual could gain access to through their connections with other individuals or groups. Stocks of social capital were defined as both the size of the potential social network/ties that an individual could mobilize and the resources of the agents in those network/ties. This theory held that the networks and linkages in which individuals took part provided the access to social capital, but were not social capital in themselves.

(2) Coleman, 1988.

Coleman (1988) explained that social capital as a conceptual tool to explain two different approaches as a microstructure of society generated macrostructure. One theory, typical sociological, where action of society is governed by norms, rules and

obligations; the other, usually from economic point of view, where society is independent and has interest alone and takes action to optimize their own utility.

Coleman identified social capital as a thing existing in structure of relationship between involved actors. An example is self-reliance of a group of people: between merchants of diamond based on family and religious ties; between members of secret cells in movement of Korean students based on similar origins, or schools and Churches; and between merchants in an Egyptian market based on relationship of family ties and length of operated business. He referred to two features of social capital. The first is multiplex; where two actors have several dimensions in their relationship; as in case of two friends attending a similar Church or children attending a similar school in a set of people and thereby other way in relating to others in the group of people.

In Coleman's description, social capital with strong ties and two describe features generally showed a strong tie: multiplexing has analogue in social network literatures where Wellman and Berkowitz (1988) discussed multi-stranded ties, and the concept of closure echoes for some social network concepts of close family. In conclusion, Coleman stated that ties of family and society seem to be weaker, so that, in future, we will widely rely on formal organizations of informal networks; society may lose sentiment of social network theories and pre-aging of Putnam's work.

While both Bourdieu (1986) and Coleman (1988) recognize the role of social capital in individual wellbeing, and also that social capital is related to linkages between actors, there is a key difference between them. Westlund (2006) provides an excellent and concise summary of these differences. He argues that while Bourdieu's viewpoint is that links between actors facilitate the procurement of social capital,

Coleman suggests that it is these links themselves which are social capital. The difference between the two lies, therefore, in their different understandings of exactly what social capital is. It is, however, an important difference, as the methods of expanding the stock of social capital under Bourdieu's definition include increasing or broadening the resources available to an individual, while Coleman's definition means that the quality and quantity of social linkages and networks dictates the stock of social capital available.

As Coleman did, Putnam formulated definition of social capital relies on social networks: "connections among individuals-social networks and the norms of reciprocity and trustworthiness that arise from them". Putnam (2000) found that social capital increasingly decreased in US, based on three indicators as he reported based on survey data: fewer people are members or active in civic associations and organizations; families spend less time together; and neighborliness and socializing with neighbors is down. He covered bonding and bridging and made a vital point: "in brief, bonding and bridging are not 'either-or' category where social networks can be neatly divided, but 'more or less' dimensions along which we can compare different forms of social capital" (Putnam, 2000).

2.2.1 Recent refinement

The concept of social capital has been subject to refinement over the two decades since Putnam's analysis (Claridge, 2004). These refinements arose from the realization, as researchers delved into the implications of interpersonal relationships, that not all relationships were formed for the same reason, had the same appearance or had the same outcomes. In addition, the externalities generated by social capital

were found to differ dependent on the nature of the network it was located in.

2.2.2. Levels of social capital

The term ‘level’ in this context refers to a relationship in a hierarchical structure, and in this context specifically refers to the shape of a network and how the members of the network identify with each other. While social capital should be thought of as residing within an individual, it also has an aggregate component as individual networks often sit within larger networks that have a common context (Brehm and Rahn, 1997; Newton, 1997).

In consideration of this aggregate component, social capital is often discussed in terms of the level that the network resides in after it was observed that an individual’s linkages and networks are not constrained to other individuals, but may also include group and institutions such as governments. Halpern (2005) discusses ‘levels’ of social capital, suggesting that social capital can be thought of as existing at the micro (individual) meso (group) and macro (national and international) level. Considering these different levels of social capital is important. While social capital is argued to be the linkages between individuals the nature of these linkages may be subject to (dis)economies of scale and scope, as well as externalities, at different levels of aggregation. This means that the sum of social capital amongst individuals may not be equal to the social capital in society. These externalities are often difficult to measure, but could be controlled for through including aggregate-level information or through the use of multilevel modeling.

At the micro- level, consider an individual who may have horizontal links with other individuals or vertical links with other hierarchical groups. The individual level

is a common level of social capital used in analysis and often forms a focal point for vertical or horizontal linkages. An individual may also possess a social link to an entire group or organization. That group or community acts as a higher level due to the amalgamation of individuals. An individual's brand loyalty is an example of a vertical linkage between an individual and a community (in this case a business) where there is an implicit trust relationship between an individual and an organization such that their brand acts as a heuristic for determining product preference.

At a higher order, social capital can exist between an individual and an institution such as a governing body. At this level, social linkages and trust associations exist such that individuals will allow an institution to govern on their behalf. The linkages between individuals and institutions are thoroughly examined by Putnam (1993, 2000) as discussed earlier. Examples of these relationships include community boards and local governance, where an individual who trusts these organizations allows them to represent their interests and govern.

Beyond the individual level, social capital is commonly considered at the meso-level by examining the linkages between groups of individuals. While the type of group that is examined varies, it is often the case that the group falls into several categories, being some mixture of demographic (e.g. ethnicity or age group), geographic (e.g. community or neighborhood), professional (e.g. workplace or profession), social (e.g. sports, hobbies and religion) or increasingly virtual (e.g. online forum or gaming communities) in nature.

2.2.3. Bridging (weak ties) and bonding (strong ties)

With the exponential growth in the literature involving social capital across several disciplines, it is not surprising that attempts to define social capital have resulted in several different forms of social capital becoming apparent. Within academic literature, the distinction between ‘bridging’ and ‘bonding’ forms of social capital has risen to become generally accepted (Woolcock and Narayan, 2000). Woolcock and Narayan (2000) describe this approach to understanding social capital as a networks approach, in that it identifies two separate forms of social networks with different purposes, which have different outcomes.

Moreover, Woolcock and Sweetser (2002), - bonding social capital refers to connections to people like you [family, relatives, kinship]... and bridging social capital refers to connections to people who are not like you in some demographic sense. Bonding and bridging social capital have resonance with Granovetter’s ideas of ‘strong ties’ and ‘weak ties’ respectively (Krishna, 2002).

Defined by Kerry et.al (2006), bonding social capital, which is the close-knit ties among similar individuals or groups, is said to be good for “getting by”, whereas the bridging form, representing “weaker” ties among heterogeneous individuals or groups, connects one to new resources, and is needed to “get ahead”. The central difference between the two is whether the ties are homogeneous or heterogeneous. Bonding social capital is “inward looking and tends to reinforce exclusive identities and homogeneous groups” (Putnam, 2000). Bridging social capital, in contrast, connect people or groups who are different from each other in some way and addresses how social capital facilitates resource acquisition. Unlike bonding social capital, where networks are comprised of similar people with presumably similar

resources, bridging social capital is crucial in acquiring a wider variety of resources and enhancing information diffusion within and between groups (Putnam, 2000).

Kerry et.al, (2006) reveals that distinction between homogeneous (bonding) and heterogeneous (bridging) ties are also relevant to social capital at the community level. And then, they cited opinion of Woolcock (1998) that the importance of “two distinct, but complementary forms of social capital” in a community “embeddedness and autonomy”. Embedded ties are those among members of a group, and are characterized by a “high degree of density and closure”. Autonomous social ties are those between groups or ties that “provide access to a range of non-community members” that are analogous to vertical ties of bridging social capital. Furthermore, they also noted that according to Paxton (1999), social capital within a single group (bonding social capital) may be positive for that group, but does not necessarily “spill over into ... social capital for the community”, and she focused on horizontal form of bridging social capital – between-group ties.

Bonding (strong tie) social capital may be more evident at a micro level, bridging (weak ties) is in the macro-level. We could distinguish individual relation into the linkages within the groups and linkages between different groups (individual linkages perform both a bonding and bridging function). For example, having a linkage with a neighbor would be considered bonding social capital and bridging social capital as it links an individual to the community. Similarly, participation in religious events often results in bonding social capital being formed within the congregation while facilitating bridging social capital between different socio-economic, generational and cultural groups.

2.2.4. Place Attachment

According to the theory of social capital as described earlier, social capital accumulated through investment in the establishment of new social networks and relationships, as well as investments in the strength and character of the existing network. In addition to the social characteristics, the physical characteristics (the location or environment) should also be considered. In this thesis we examine the physical characteristics as how the individual feeling to their place (sense of place or place attachment).

Place attachment is the deep emotional bond or connection that people develop toward specific places over time via repeated positive interactions. Human geographers have explored the concept of “sense of place”, as “the psychological or perceived unity of the geographical environment”, which is similar to the notions of place attachment and place identity as developed in environmental psychology (Lewicka, 2008). The concepts of place attachment and place identity have slowly gained interest in more applied fields, such as community development, community psychology, and urban planning.

Sense of place or place attachment (PA) is a multi-faceted, multi-disciplinary concept focused at different levels with many definitions. Most view it as both positive and powerful. To humanistic geographers, people’s bonding with meaningful spaces represents a universal connection that fulfills fundamental human needs (Relph, 1976). To community psychologists and sociologists, attachments to one’s town or residential neighborhood, or to particular places in one’s community, are important motivations for people to spend more time outdoors in those places, to meet and talk to one’s neighbors, to share their concerns about local problems and

ideas for solutions, and rather than flee, to ‘stay and fight’ i.e., participate in efforts both informal and organized to preserve, protect, or improve the community (Manzo & Perkins, 2006). Those efforts are often in response to some perceived threat to residents’ health, safety, property, and/or quality of life, which may also disrupt the very place attachments that led to residents’ community commitment and engagement (Brown & Perkins, 1992).

Research has focused on the explanation that the social network holds resources embedded in the location of residence thereby creating an attachment to that location (Vidal and Kley, 2010). In the field of urban planning studies and infrastructure planning, Suzuki (cited on Jeong et al 2011) investigated the impact of residential environment change to place attachment and the impact of place attachment to cooperative activity involvement.

2.2.5. The Formation of Social Capital

Social capital is created within relationships (Coleman, 1990; Massey and Espinosa, 1997; Portes, 1998). It facilitates individual rational pursuits (Coleman, 1988) and assists in one's ability to make use of relationships with other individuals to improve economic well-being (Portes and Landolt, 1996). If individuals create relationships it means that she or he invests in social capital. There are two type of investment: (i) direct investment (for example, getting to know someone, or performing a favor) and (ii) indirect investment (such as having shared norms, and values, or having a reputation for trust or ability) in relationships, which generates knowledge spillovers through interactions along the networks (Performance and Innovation Unit, 2002).

Although there are competing definitions of social capital (see Bjørnskov 2006; Reimer et al. 2008), the idea of social relations through network interactions is always present. Reimer et al. (2008), for example, described social capital as ‘the social networks and their associated norms that may facilitate various types of collective action’. Coleman (1988) explained community social capital as the social relationships that exist among people and the relationships they have with institutions in the community.

The network concepts of density and homogeneity could be used to characterize the links in a network. For example, a tie from a dense and homogenous network could be assumed to be “strong” or “bonding.” Intra-community or intra-familial ties are referred to as “bonding” ties and extra-community or extra-familial ties are referred to as “bridging” ties. This concept is based on the work of Granovetter, Burt, and Lin which is the foundation for the recent popular literature where “strong” and “weak ties” have come to be called “bonding” and “bridging” ties (Gittell & Vidal, 1998).

Based on these, it is reasonable to construct social capital formation from the concept of strong (bonding) and weak ties (bridging) and together with the construct individual’s physical characteristics we include the concept of sense of place.

2.3. Migration and Social Capital

2.3.2. Migration

Migration is temporary or permanent movement of individuals or groups of people from one geographical location to another for many reasons. Migration can be said as old as humanity itself and the theory of migration fairly new. Ravenstain

(1885) is one of the early writers of modern migration based on his "Laws of Migration" on empirical data migration (cited on Grigg, 1979), wrote that most of migrants only travel for short distances. Rural-to-urban and international migration offers residents of developing countries a potential strategy for economic advancement.

In the context of international migration, the migrant network hypothesis predicts that the migration of a person directly impacts the likelihood of migration of those in their social network or social ties. The literature predicts that these personal ties lower costs to migration and may increase its benefits and ease (by facilitating helpful information and/or resources), and are thus expected to increase the likelihood of migration for those who have them. Together, these ties compose networks of relationships.

On migration literature, many studies have primarily focused on close family networks (parents and siblings) or household networks on one hand; and aggregate levels of community migration at the village or regional level on the other (for examples, see: Massey and Espinosa 1997). Largely missing is an analysis of family networks beyond parents and siblings, and definitely missing from the literature is a methodical analysis of friendship networks. Although Palloni et al (2001) wrote that network based on kinship are not necessarily the most efficient or most salient in shaping migration decisions and weaker ties or friendship or acquaintance may be equally or more important than kinship ties, friendship ties have been systematically excluded from analysis of the act of migration itself.

Most migrants clearly do not take the decision to migrate by him/her, but their families are likely to have some influence. Therefore, the migration decision should

be considered on a household level. It is also influenced not only by the relationship between potential migrants with close relatives and friends but also by outer of close friends and relatives. Besides, the relations with neighbors and the relation with the community also influence the decision to migrate. It has been shown that social capital and networks developing over time as more people migrate reduce the costs and ease of migration for future migrants.

2.3.3. Migration and Social Capital

Massey et al (1993) stated that migration research was like a puzzle, separated but have relation each other's. There is no standard tool to analysis migration movement. Each country and region has specific characteristics. Several studies tried to incorporate social capital theories and migration such as Gamio, 1930; Aguilera, 2002; Massey et al, 1987; Portes and Sensenbrenner, 1993 and many others.

In early 20th century, Gamio (1930) documented the use of interpersonal networks in realm of immigrants from Poland and Mexico (although they did not certainly lead to social capital). Gamio described social ties between relatives and friends who had migrated before the migrants, even prospective workers of migrants got access to knowledge, help, and other resources facilitating them to do international movement. Ties of kinship and friendship, to and from themselves, gave benefits the migrants. When an individual migrated, interpersonal networks and social relationship could change into resources which might be used by friends and relatives to get access to work in host country.

Based on the fact, in 1987, Massey and colleagues tried to firstly use concept of social capital in migration stating that peasant in Mexico “may be poor in financial

resources, but they are wealthy in social capital, which they can readily convert into jobs and earnings in the United States”. It can be that there were peasants in Mexico because they had relationship to their relatives or friends working in US so that they could move easily to US with help of their relatives or friends. It is also consistent with opinion of Bourdieu and Wacquant (1992) which stated social capital is the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationship of mutual acquaintance and recognition.”

On the other hand, Portes and Sensenbrenner (1993) tried to incorporate migrant networks as form of social capital. They facilitated value of *introjections* because they assumed that socialization among members of society is ‘migration culture’ (see Kandel & Massey, 2002). It functions as reciprocal exchange, where benefit given to friends and relatives as a part of general system of exchange was that migrants helped their friends and relatives, they did not hope direct payment, but they expected help given to them or their relatives in future (Massey et al., 1987). Those migrants also gave limited solidarity to reinforce ties of kinship, friendship, and general society origin of migrants (Massey et al, 1987). Finally, it has marked by mutual reliance, because migrants who rejected to help their friends or families could be expelled or punished by relatives and friends either in home country or host country (Mines, 1981; Reichert, 1982).

One existing possibility indicates that migrants’ friends or relatives identified work with available high wage and they gave this information to their friends and members of families looking for jobs, because positions frequently existed before advertisements were issued or published only in informal networks (Grieco, 1990).

They surely had information before other applicants could be very profitable, as Burt (1992) indicated that difference of time to obtain information could make great difference to those who were able to spend chances. Thus, the connected migrants could pass protracted and inefficient process of application for jobs, so that they could obtain good jobs and they could directly choose position which had been identified by friends with stable criteria, certain position was available and paid wage was good.

Friends and relatives could help migrants by providing useful information where there was job location, how to impress employer, how to behave in workplace, how much wage asked for, and what were jobs and workplace that need to avoid (Aguilera, 1999). If they had routine access to other wider and distributive networks and strong and weak social ties, they could exist in better position to obtain information on job vacancies and opportunities. For example, Massey and colleagues (1987) found that immigrants from one community of Mexico met every week in the park of Los Angeles to watch team of football playing. They did not only enjoy match, but also make contact, socialization, and exchange information, so that there was chance given to migrants on distribution of information concerning job opportunities.

These social activities gave migrants access to information which were impossibility existed in social networks of their families. Study by Granovetter (1973) in professional work indicated that *weak ties* relate to prospective workers (job applicants) with non-redundant information, where connection to members of non-families might be more profitable than social networks of families. The importance of friendship network in looking for jobs was highlighted by Aguilera

(2002), who found that positive relationship of friendship is associated with participation of labors.

Some studies above emphasize the relationships between prospective migrants and relatives and friends in making decision to migrate. It is more widely known as “strong ties” in the concept of social capital, where relationship occurring is only to close relatives and friends (Palloni et al., 2001); Fussel and Massey, 2004). While research of Liu (2011) tried to analyze how “weak ties” affect the decision to migrate. The results indicate that personal migrant networks outside close family increased potential possibility of migrants to work in host country.

Stark and Dorn (2013), proposed a model to integration strategy between home country and host country. They found that strong ties with the home country and with the host country can coexist. Abramitzky et al (2013) studied the effect of wealth on the probability of internal or international migration during the Age of Mass Migration (1850–1913) in Mexico. They found wealth influences the migration decision by affecting the available opportunities in the destination country.

The above review summarizes the most relation between social capital and migration. First, we define the construct of social capital formation. Second, we explain about migration and social capital (migration; migration and social capital), comparing and contrasting from both theories, we summarize two concepts that are strong ties (bonding) and weak ties (bridging). We combine it physical theories of social capital as the investment in living environment (sense of place or place attachment). Finally, we obtain that as the concept of strong ties is associated with ‘ties with neighbors’ and weak ties associated with “ties with community” and the feeling to the place as “sense of place”. We measured social capital in this study by

using these concepts, and connected this with the respondent decision choice (whether migrate or stay).

In spite of an abundance of qualitative investigations on social networks or social capital and migration that already explains above, very few studies incorporated the construct of social capital and migration decision. The literatures are almost seen social capital as ties (strong and weak ties) and base on my knowledge no literature construct social capital from these ties. Overall this literature seems to assume that social networks' main function is information provision, such as new business practices (Udry 2004), health practices (Behrmann et al. 2002; Miguel and Kremer 2003), job information (Munshi 2003), or other (for a summary see Durlauf and Fafchamps 2004).

My study also contributes to develop theoretical model based on economic point of view on “individual investment of social capital” from social interaction or social relation activities. As we explains before, if individuals create relationships it means that she or he invests in social capital (Performance and Innovation Unit, 2002). We employed this economic model on overlapping generation model theory.

2.4. Summary and Conclusions

This chapter explains the broad concepts of social capital and how it relation with migration. In section 2.2. we examine the concept of social capital, how it can be invest by individual and it relation with individual demographic characteristics.

As we explain in this chapter, while a relatively young and dynamic concept, social capital has developed quickly from the attentions of several disciplines and the challenges of skeptics to become a solid, well developed and robust concept. The

concept itself, first proposed by Hanifan (1916), who used the term to describe the benefits of community action facilitated by interaction, and later further defined by Bourdieu (1986) and Coleman (1988). This concept benefited greatly from the empirical and theoretical modeling introduced by Putnam (1993, 2000), and now available across a wide range of disciplines and settings. The modern understanding grew from Putnam's work and modern research has established social capital as a member of the capital family, by being a stock which is invested in and which provides a yield (Westlund, 2006).

In the first section we explain the concepts of social capital. The next is recent refinement of social capital. In this section, we explain the concept of social capital in micro and meso level. Micro level of social capital is related to how investment of individual in social capital and what the relation to their social capital in the meso level. Micro level examine the relation with close relative and friends (sense of neighbors) and meso level shows social as capital as relation to more wide in the community (sense of community). In the meso level, beside the relation with the community, we can shows that social capital investment is largely determined by the location and environment, both social and physical, that an individual is located within (sense of place).

In the end of this section we explain about social capital formation, constructed by strong and weak ties and sense of place. Strong ties refer to ties with neighbors, weak ties refer to ties with community, and the last is sense of place. In this section we introduce the definition of investment in social capital as individual effort to make relationship among others. After that, we explain migration, migration network and the relation between migration and social capital.

From the concept of investment in social capital and the decision choice will explain more detail in chapter 4 (as theoretical methodology). To develop this model, in the chapter 3 we examine from the data from research area how the relation between individual demographic characteristic, individual feeling to their living environment and neighbors, their activity in community activities and their decision (migrate or stay).

Bibliography

- Abramitzky R., Boustan L. P., Eriksson K. 2013. Have the poor always been less likely to migrate? Evidence from inheritance practices during the age of mass migration. *Journal of Development Economics* 102 (2013) 2-14
- Aguilera, Michael Bernabé. 2002. The Impact of Social Capital on Labor Force Participation: Evidence from the 2000 Social Capital Benchmark Survey. *SOCIAL SCIENCE QUARTERLY*, Volume 83, Number 3, September 2002
- Aguilera, Michael B. 1999. "The Labor Market Outcomes of Undocumented and Documented Immigrants: A Social and Human Capital Comparison." Ph.D. dissertation. Stony Brook, N.Y.: Department of Sociology, SUNY, Stony Brook.
- Behrman, J., Hans-Peter Kohler, and Watkins S.C.,. 2002. "Social Networks and Changes in Contraceptive Use over Time: Evidence from a Longitudinal Study in Rural Kenya," *Demography*, 39(4), 713-738
- Brehm, J., and Rahn, W., (1997). Individual-level evidence for the causes and consequences of social capital. *American Journal of Political Science*. 999-1023.
- Brown, B. B., & Perkins, D. D. 1992. Disruptions in Place Attachment. In I. Altman & S. Low (Eds.), *Place Attachment* (Vol. 12). New York: Plenum. 1992. p. 279–304
- Bjørnskov, Christian. 2006. The multiple facets of social capital. *European Journal of Political Economy* 22(1): 22–40.
- Bourdieu, P., 1986. The forms of Capital. In Richardson, J.G. (Ed.). *Handbook of Theory and Research for the Sociology of Education*. New York: Greenwood Press, 241-258.
- Bourdieu, Pierre, and Wacquant, Loic J. D. 1992. *An Invitation to Reflexive Sociology*, Chicago: University of Chicago Press.
- Burt, Ronald S. 1992. *Structural Hole, The Social Structure of Competition*. Harvard University Press.

- Castiglione, D. Van Deth, J and Wolleb, G., (eds.) (2008). *The Handbook of Social Capital*. New York: Oxford University Press Inc.
- Claridge, T. 2004, 'Social Capital and Natural Resource Management', Unpublished Thesis, University of Queensland, Brisbane, Australia. Retrieved from http://www.socialcapital_research.com/literature/theory.html. Accessed November 29 2014
- Coleman, J.S., 1988. *Social Capital in the Creation of Human Capital*, *American Journal of Sociology*, Vol. 94, University of Chicago.
- Coleman, J., (1990). *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.
- Davis B, Stecklov G, and Winters P., 2002. "Domestic and International Migration From Rural Mexico: Disaggregating the Effects of Network Structure and Composition" *Population Studies*.
- Durlauf, S., and Fafchamps M., 2004. "Social Capital," NATIONAL BUREAU OF ECONOMIC RESEARCH 1050 Massachusetts Avenue Cambridge, MA 02138.
- Fussell, Elizabeth, and Douglas S. Massey (2004). "The Limits to Cumulative Causation: International Migration from Mexican Urban Areas." *Demography* 41:151-71.
- Gamio, Manuel. 1930. *Mexican Immigration to The United States*. The University Chicago Press.
- Gittell, R., & Vidal, V. (1998). *Community organizing: Building social capital as a development strategy*. Thousand Oaks, CA: Sage Publications.
- Grigg, D.B. 1977. E. G. Ravenstein and the " laws of migration". *Journal of Historical Geography*, 3, 1 (1977) 41-54
- Grieco, Margaret. 1990. *Keeping It in the Family: Social Networks and Employment Chance*. *American Journal of Sociology*, Vol. 95, No. 6 (May, 1990), pp. 1592-1594
- Halpern, D. (2005). *Social Capital*. Cambridge: Policy press
- Jacobs J., (1961). *The Death and Life of Great American Cities*. New York: Random House.
- Jeong, H., Matsushima K., and Kobayashi K. 2012. Identity and Communication in Marginal Rural Area—Case Study of Nichinan Town in Japan, *Journal of Society of Civil Engineers*, Ser.D3, Vol. 68 No.5. p.I_499-I_511 (in English).
- Kandel, William and Massey, Douglas S. 2002. *The Culture of Mexican Migration: A Theoretical and Empirical Analysis*. *Social Forces*, Volume 80, Number 3, pp. 981-1004.
- Krishna A. 2002. *Active Social Capital: Tracing the Roots of Development and Democracy*. New York: Columbia University Press

- Kerry A., Flora, J., and Ryan, V. 2006. Bonding and Bridging Social Capital: The Interactive Effects on Community Action. *Community Development*, Volume 37, Issue 1, 2006. Pp. 36-51
- Lewicka, M. (2008). Place Attachment, Place Identity, and Place Memory: Restoring the Forgotten City Past, *Journal of Environmental Psychology* 28 (2008) 209–231. 2008 Elsevier Ltd.
- LIU, Mao-Mei. 2011. Migrant Networks and International migration: Testing Weak Ties. MAFE Working Paper 14. Departament de Ciències Polítiques i Socials. Universitat Pompeu Fabra. Barcelona, Spain.
- Lin N, Cook K, Burt RS, (editors). 2001. *Social Capital: Theory and Research*. Hawthorn, NY: Aldine de Gruyter.
- Loury, G. C., 1977. A Dynamic Theory of Racial Income Differences. In Wallace, P.A. and Le Mund, A. (Eds.). *Women, Minorities and Employment Discrimination*. Lexington: Lexington Books.
- Manzo, L. C., & Perkins, D. D. (2006). Finding common ground: The importance of place attachment to community participation and planning. *Journal of Planning Literature*, 20(4), 335–350.
- Massey D.S., and Espinosa K.E., 1997. What's Driving Mexico-U.S. Migration? A Theoretical, Empirical, and Policy Analysis. *American Journal of Sociology*, Vol. 102, No. 4 (Jan., 1997), pp. 939-999
- Massey DS, Arango J, Hugo G, Kouaouci A, Pellegrino A, Taylor JE. 1993. Theories of international migration: A review and appraisal. *Population and Development Review* 19:431-66
- Massey, Douglas. S., Alarcón, R., Durand, Jorge, González H. 1987. *Return to Aztlán: The Social Process of International Migration from Western Mexico*, Berkeley: University of California Press.
- Mines, Richard. 1981. *Developing a Community Tradition of Migration: A Field Study in Rural Zacatecas Mexico and California Settlement Areas*. Monographs in U.S.-Mexican Studies No. 3. La Jolla, CA: Program in United States-Mexican Studies, University of California at San Diego.
- Miguel, E. and Kremer K. 2003. "Networks, Social Learning, and Technology Adoption: The Case of Deworming Drugs in Kenya," Mimeo, University of California, Berkley.
- Munshi K., 2003. "Networks in the Modern Economy: Mexican Migrants in the U.S. Labor Market," *Quarterly Journal of Economics*, 118(2), 549-599.
- Ostrom, E. and Ahn, T.K., 2003. *Foundation of Social Capital*, Edward Elgar Publishing.

- Palloni, Alberto., Douglas S. Massey, Miguel Ceballos, Kristin Espinosa, and Michael Spittel. 2001. Social Capital and International Migration: A Test Using Information on Family Networks. *American Journal of Sociology*, Vol. 106, No. 5. March 2001. p. 1262-1298
- Paxton, P., 1999, Is Social Capital Declining in the United States? A Multiple Indicator Assessment, *American Journal of Sociology*, 105:88-127
- Performance and Innovation Unit, 2002. Social Capital. A Discussion Paper. April, PIU, London.
- Portes, Alejandro and Sensenbrenner, Julia. 1993. Embeddedness and Immigration: Notes on the Social Dynamics of Economic Action. *American Journal of Sociology*, Volume 98, Number 6, pp. 1320-1350.
- Portes, A., and Landolt, P., (1996). The Downside of Social Capital. *The American Prospect*. 26, 18-21
- Portes, A., (1998). Social Capital: Its Origins and Applications in Modern Sociology. *Annual Review of Sociology*. 24(1), 1-24
- Putnam, R. D., (1993). *Making Democracy Work. Civic Traditions in Modern Italy*. Princeton: Princeton University Press.
- Putnam, R.D., 2000. *Bowling Alone: The Collapse and Revival of American Community*, New York: Simon and Schuster.
- Relph, E. (1976). *Place and Placelessness*. London: Pion
- Reimer, B., T. Lyons, N. Ferguson, and G. Polanco. 2008. Social capital as social relations: The contribution of normative structures. *Sociological Review* 56(2): 256–74.
- Reichert, Joshua S. 1982. "Social Stratification in a Mexican Sending Community: The Effect of Migration to the United States." *Social Problems* 29:422-33.
- Stark O., and Dorn A., 2013. Do family ties with those left behind intensify or weaken migrants' assimilation? *Economics Letters* 118 (2013) 1-5
- Taylor, J.E. 2006. International Migration and Economic Development. *INTERNATIONAL SYMPOSIUM ON INTERNATIONAL MIGRATION AND DEVELOPMENT. UN/POP/MIG/SYMP/2006/09*. Population Division, Department of Economic and Social Affairs, United Nations Secretariat
- Udry, C., 2001. "Social Learning Through Networks: The Adoption of New Agricultural Technologies in Ghana," *American Journal of Agricultural Economics*, 83(3), 668-73.
- Vidal, S. & Kley, S. 2010. The Geographic proximity of Social Ties in Migration Intentions and Behaviour, *Migremus Arbeitspapiere* Nr. 1/2010
- Wellman, Barry and S.D., Berkowitz. 1998. *Social Structures: A Network Approach*. Cambridge University Press.

- Westlund, H., (2006). *Social Capital in the Knowledge Economy. Theory and Empirics*. New York: Springer.
- Woolcock, M. and A. T. Sweetser. 2002. Bright Ideas: Social Capital-The Bonds That Connect. *ADB Review* 34 (2).
- Woolcock, M., and Narayan, D., (2000). Social capital: Implications for development theory, research, and policy. *The World Bank research observer*, 15(2), 225-249.

Chapter 3

MIGRANT AND NON MIGRANT CHARACTERISTIC

3.1.Introduction

The agriculture sector supports the livelihood of millions of Indonesians. With more than 60 percent of the population living in rural areas, farming remains the main occupation and source of income for much of the country's population. The share of agriculture in Indonesia's overall economic activity has been declining for several decades, as structural shifts in the economy have occurred away from agriculture oriented activities toward a service driven economy. In 2013, this sector employed around 49 million Indonesian individuals, which represents 35 percent of the total Indonesian labour force. Although in absolute numbers the agricultural workforce keeps growing, its relative share of the total Indonesian workforce has declined significantly from 55 percent in the 1980s to 45 percent in the 1990s and currently to 35 percent (ILO, 2013). Only during the Asian Financial Crisis in the late 1990s this share grew significantly because unemployment in both the industry and services sectors were absorbed by the agriculture sector (mostly informally).

The decrease of an agricultural sector to absorb the labor force in Indonesia has an excess to the increasing number of unemployment, especially in a rural area with the characteristic of low skill and low education. Labor force tries to find jobs in all sectors, including in informal sector and abroad. In August 2010, it was estimated that approximately 59.0 per cent of those were working in the informal economy. By May 2013, it was estimated that 53.6 percent of jobs were in the informal economy and 46.4 per cent of jobs were in the formal economy (ILO, 2013). Even for the migrants, they work in formal and informal economy.

Working abroad is one way to find job for rural inhabitants, especially for young generation. Rural households use migration strategies and allocate labor resources for increasing their income and reducing the risks. Migration is commonly used by rural inhabitants to ensure survival, pursue economic activity, and support household living. Migration has always been positively viewed in terms of visible monetary gains generated for the origin country. However, in assessing the benefits of migration, the issue of the invisible, non-monetary social cost remains largely unrecognized as part of the inevitable “cost” which migrants have to pay in exchange for the prospect of a better life for their families.

Malang Regency is a region with the second largest population and the largest contributor of migrant workers in East Java Province. Not only low incomes but also limited jobs in the village are the main reason why people prefer to work out to increase their income. The limited income and minimum job opportunities in the village serve as main rational for the inhabitants to have preference working overseas

with the expectation when they come back, they will have better economical condition.

Arjowilangun village is one of the largest contributors of migrant workers abroad in Kalipare district, Malang Regency. Arjowilangun village is one of developed and modern villages among other villages in this district. This village consists of 5 hamlets, Barisan, Panggang Lele, Lotekol, and Lodalem. The center of the village is in Panggang Lele and Lodalem hamlets. Migrant workers in this village set up a cooperative agency (Koperasi in Indonesian) to maintain the result of migrant and make relation with network business in abroad. This village is typical rural area in Indonesia where some of inhabitants work as migrant workers.

Main objective of this chapter is to capture suitable perspective of social capital and migration from an empirical case of two periods' field survey in Arjowilangun village, Kalipare district, Malang Regency, East Java province, Indonesia. This chapter comprises into 5 sections. Section two describes the field survey design which consists of sample selection and number of respondents, list of questions, and brief description of the research area. Then, it continues with the depiction of the field survey results which are divided into two parts. The first is about demographic attributes of the respondents (migrant, non migrant household and comparison between them) that are illustrated in section three. In this section we also explain the relation of the data in descriptive statistic analysis, regarding the data already collected. The second is the respondents feeling about the value and belief related to their village – neighbors and the activity of respondent in community activities in next section (section four). Finally, this chapter will be summarized with conclusion

remarks of the whole field survey activity. In conclusion, we argue that from analysis of the data some implications will occur. These implications will be derived in the next analysis in the next chapter, starting from chapter 4 as theoretical modeling and chapter 5 and 6 as empirical evidence.

3.2.The Field Survey Design

This section describes the field survey design which consists of survey method, list of questions, and general description of the research area. The field survey was conducted in two phase (November 2012 and February 2014), whereby the main goal is to investigate the demographic characteristic and social capital measurement using questions in questionnaire survey. The first type of questions is related to the values and belief to the living environment (village) and neighbors. Second type of questionnaire is the activity of respondents in the community activities. In addition, we have done survey by staying in the village location for 7 days to get deep information from the respondents. All respondents were interviewed individually with the help from some students as interviewers.

Through systematic sampling, 250 households living at Arjowilangun village, Kalipare district, Malang regency, East Java Province Indonesia, were selected as the respondents for the first survey and 250 households' respondents in second survey. Five hamlets were selected covering Pangganglele, Lodalem, Lotekol, Duren and Barisan.

Face-to-face interviews have been conducted effectively within seven days by 10 surveyors. Interviews were scheduled between 07:00 a.m. and 09:00 p.m. depending on the respondents' convenience and readiness. Respondents in this research are

households: (i) households with one or more migrant workers in the family members, (ii) household with non migrant workers. We preferred to interview directly with the head of the household; the second option is when the head of household was not accessible at the time of the interview, a representative of the family (husband/wife, mother, father, grandfather, grandmother, children, brother or sister) could substitute him/her depending upon their willingness.

In this chapter, it is assumed that individual respondent preference on choice to migrate might be seen as a household's decision since once he or she decides to migrate or not, it becomes the choice of each representative of household. Then, the term 'respondent' and 'household' was used interchangeably. As additional note, in order to simplify without any effect of reducing the meaning, from this chapter we use terminology 'migrant workers' as work force who works outside of the village.

3.2.1. Sample Selection and Number of Respondents

There are no rules for sample size in qualitative inquiry (Paton, 1990). Israel (1992) provides a table of recommended sample sizes for +7% precision level where confidence level is 95% and $p = 0.5$. According to the table, and for purposes of this research, the researcher used an estimated population size $N = 3,470$ (between 3,000 and 4,000) and thus a sample size goal of $n = 194$. 56 respondents were added to seek a large numbers of participants so the total migrant respondents were 250. Patten (2005) suggests that, a researcher should first consider obtaining an unbiased sample and then seek a relatively large number of participants. As a comparison we also interviewed 250 respondents who do not migrate.

3.2.2. List of Questioner

The main research aims to cover four items as follows:

- To explore the demographic characteristic of migrant and no migrant respondents;
- To investigate the ties with community, ties with neighbors and place attachment (sense of place);
- To investigate the activity of migrant household respondents in the community activities;
- To investigate the impacts of social capital and migration in rural area.

Based on the aims of the research above, we consider developing questioner survey which consists of four sections as shown in the Table 3.1. below.

Table 3.1. The Summary of Questionnaire Survey

Research Aims	Research question
To explore the characteristic of respondent (migrant and non migrant)	Income, gender, family members, education, occupation, and duration of contract.
To explore the values and belief to the village and neighbors	We ask the respondent within 12 questions related to the construct of social capital such as: sense of community, neighboring and sense of or place attachment
To investigate activity in the community activities	We ask the respondent within 13 questions related to participation in community activities

3.2.3. Brief Description of Research Area

Located nearby Surabaya Metropolitan City, Malang Regency has been

considered as one of the second largest regencies in East Java Province. Malang regency is bordered by Blitar and Kediri Regencies on the West; Jombang, Mojokerto and Pasuruan Regencies on the North; Probolinggo and Lumajang Regencies on the East and Indian Ocean on the South. In this geographical location, Malang regency has strategic location in East Java Province. The coordinate of Malang regency is located at 112°17',10,90" - 122° 57',00,00" longitude east, and between 7°44',55,11" - 8°26' ,35,45" longitude south.

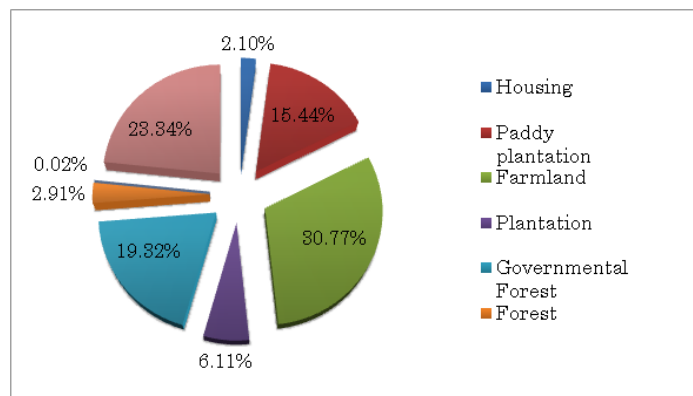


Figure 3.1. Land Use of Malang Regency

Figure 3.1. explains land use in Malang regency. Agricultural sector consists of paddy field and farmland, and it takes 15.44% and 30.77% respectively from the total of land use. As we have mentioned in the previous description, the field survey was conducted in Arjowilangun village. Arjowilangun village as depicted in the Figure 3.4., comprises into 5 hamlets, namely (i) Barisan, (ii) Duren, (iii) Pangganglele, (iv) Lodalem, and (v) Lotekol.

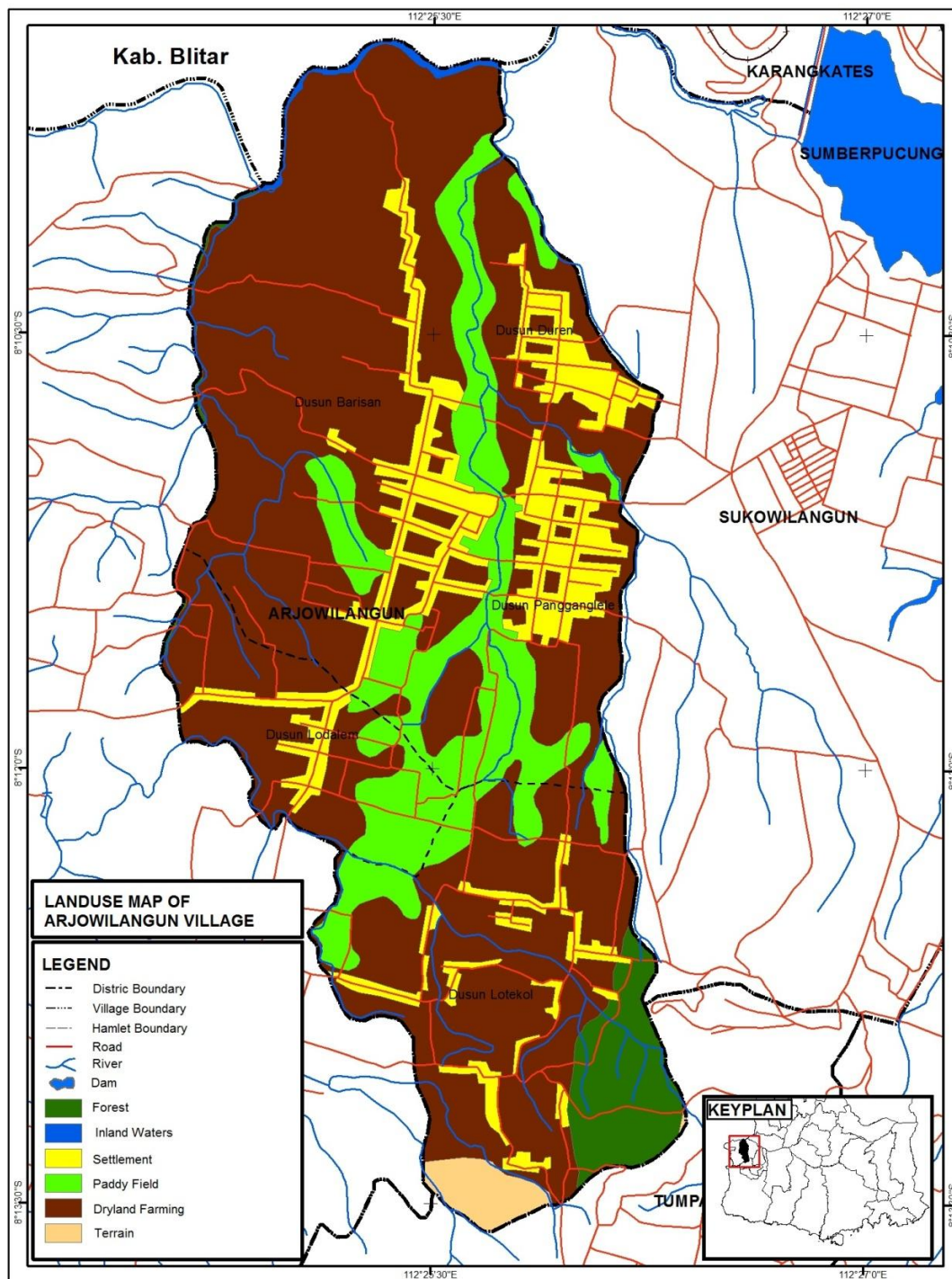


Figure 3.4. Land Use Map of Arjowilangun village

In general, the total area of Arjowilangun village covers 1,598.01 Ha, whereby the land use is dominated by (i) paddy & dry field (80.09% or 1,279.95 Ha),

(ii) government plantation & forest (4.69% or 75.02), open space (1.50% or 23.98 Ha); and (iii) residential (13.70% or 219.07 Ha). This village lies on 293 meter above sea level, with the distance to the closest capital city (Malang Regency) is around 22,5 km and the distance to the closest district centre (Kalipare district) is around 6 km. Figure 3.2. depicts the location of Indonesia and East Java province and Figure 3.3. is the location of Malang regency.

The total inhabitants in Arjowilangun village (2011) are 13.637 who consist of 6.476 male and 7.161 female, and 3.470 households. The main livelihood of villagers is (i) agriculture sector (50.58%); (ii) small medium enterprise (21.69%); and (iii) works in service/commercial sector (27.73%).

3.3.Demographic Attributes

The respondents of this research are migrant and non migrant households. As we mentioned before, the total number of respondents were 500 choosen from the inhabitants in Arjowilangun village, and we distributed to five hamlets. The questions related to demographic attributes are: income, gender, family members, education, occupation, and duration of contract (only for migrant respondents).

3.3.1. Migrant Household Respondents

The implementation of the interview should be conducted directly to migrant workers. If at the time of the interview, migrant workers do not exist, it is done with a representative household. It depends on the readiness of respondents. In this thesis, the types of representative migrant are husband, wife, mother, father, grandfather, grandmother, children, brother, or sister.

This section is started with the explanation of individual characteristic data. Figure 3.5. examines the level of income of migrant household respondents. The figure shows the real income that they received monthly in the situation with or without remittance. The remittance is sent by the member of family who works outside of the village as domestic migrant or as international migrant. Besides, this picture also presents the income of the migrant families whose family members come back and do not become a migrant worker anymore. In other words, this picture reveals the household income without remittance.

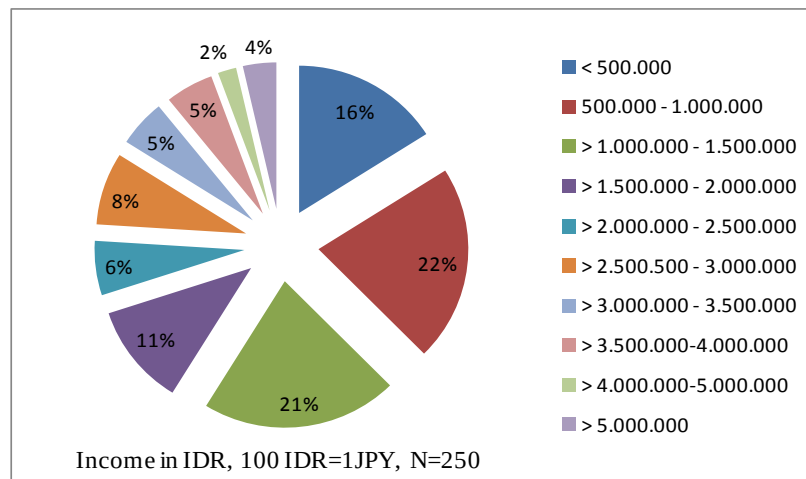


Figure 3.5. Household Income without Remittance

In the questionnaire survey, we asked the respondents to reveal their household monthly income using 10 categories as: (i) less than IDR 500,000 (JPY 5,000), (ii) IDR 500,000 –1,000,000 (JPY 5,000 – 10,000), (iii) IDR 1,000,000 – 1,500,000 (JPY 10,000 – 15,000), (iv) IDR 1,500,000 – 2,000,000 (JPY 15,000 – 20,000), (v) IDR 2,000,000 – 2,500,000 (JPY 20,000 – 25,000), (vi) IDR 2,500,000 – 3,000,000 (JPY 25,000 – 30,000), (vii) IDR 3,000,000-3,500,000 (JPY 30,000-35,000), (viii) IDR 4,000,000-4,500,000 (JPY 40,000-45,000), (ix) IDR 4,500,000-5,000,000 (JPY

45,000-50,000) and the last (x) more than IDR 5,000,000 (JPY 50,000). The minimum wages of Malang Regency (UMR or *upah minimum regional in Indonesian*) as decided by government in 2013 is IDR 1,343,700 or JPY 13,437. This table shows that the income of the respondents is generally still quite low. If we exclude the income of migrant members in the family, the income of 40 respondents or of 16% of the population of the village is below the regional minimum wages or UMR. Whilst 55 respondents or 22% is in the range of regional minimum wages, and 155 respondents or 62% has income above the regional minimum wages (Figure 3.5).

If we include the income of migrant members in the total household income, we can see the difference (Figure 3.6). Migrant households have higher income than non-migrant households. Only 27% of migrant household respondents have income less or the same as minimum regional wages. Moreover, we may argue that income in the home country is lower than in host country and one of the reasons to migrate is the difference of wages.

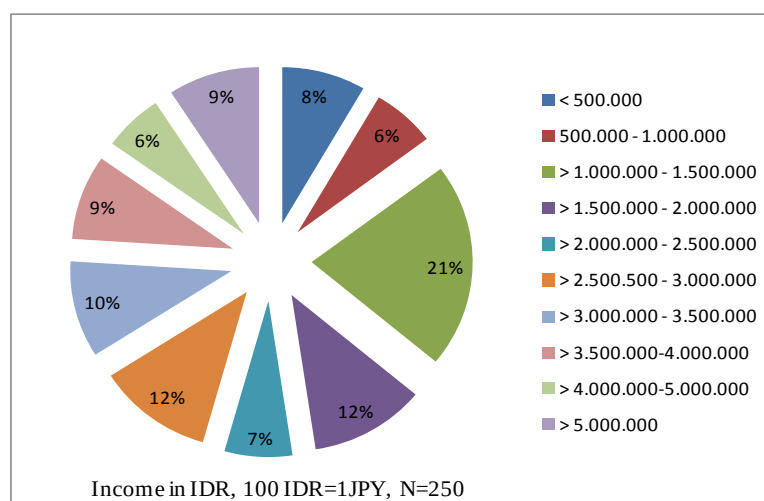


Figure 3.6. Household Income with Remittance

Figure 3.7 displays the types of family members who migrate. The family members who migrate are mostly the wife (36%), the husband (31%), and the child (30%). The number of mother, grandson and relative who migrate is not so many, only 1 per cent of the respondents. The proportion of the wives is more than the husbands due to their position in the household; they are not as the head of household but they should help their family income. In addition, the type of work offered is mostly as housemaid or caregiver, so only woman can apply. It indicates that wives have an intention to improve their family income, even though it is a very hard decision for the woman to leave their family behind.

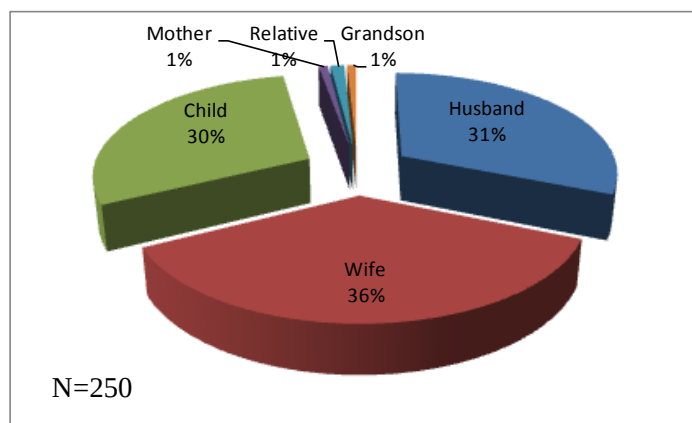


Figure 3.7. Whose Migrate

There are more female respondents (145 respondents or 58%) than male respondents 105 respondents (42%) (Figure 3.8). This data supported the above data (Figure 3.8.), where the proportion of the housewife who migrate is more than the husband. It has relation with the data that the destination of the female workers is Hongkong, Saudi Arabia, and Taiwan in which they work as housemaid or caregiver (BN2TKI, 2013).

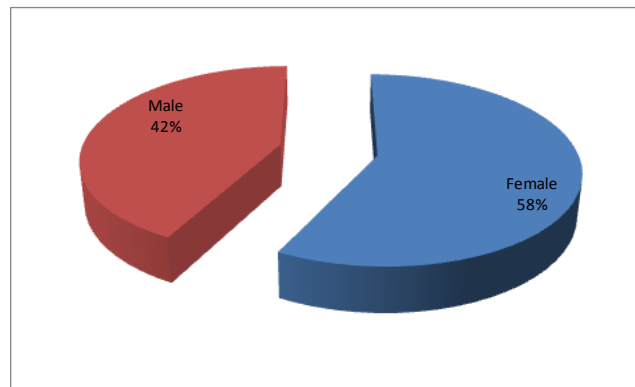


Figure 3.8. The Sex Identity of Migrant Respondents

Referring to Figure 3.9., the most common size of family is family with 3 inhabitants who live in the same single housing unit consisting of parents (father and mother) plus one member (34.8% or 87 households). Another six types of family size are (i) family with 4 members (73 household or 29.2% of total households), (ii) family with 5 members (33 household or 12.8 % of total households), (iii) family with 2 members (31 households or 12.4 % of total households), (iv) family with 1 member (15 households or 3.6 % of total households), (v) family with 6 members (9 households or 3.6 % of total households), and (vi) family with 7 members (3 households or 1.2 % of total households). Households with six and seven members consist of parents, two children or one child and grandfather and grandmother.

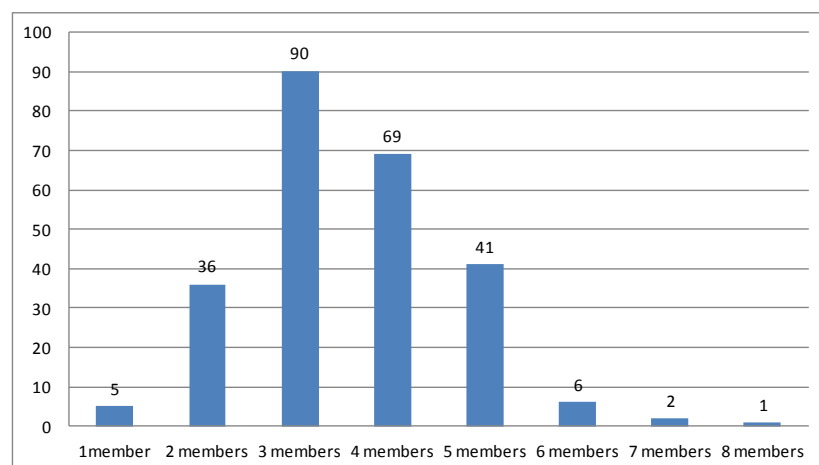


Figure 3.9. The Size of Family (show the number of respondents)

The most type of occupation before the migration is as farmer (63 respondents), and housewife (40 respondents). Then, the others are as not working or student, farm workers, housemaid, construction workers, entrepreneurs, etc (Figure 3.10). Most of the respondents are as farmers because they live in rural area, where almost inhabitants live in agricultural sectors. Housewife is the second type of occupation the respondents did before the migration. While unemployment and student are the third type of occupation the respondents had. It indicates that children are eager to help their parent, and working as migrant workers is one way to get job with high salary compared with working in agriculture sector in home country.

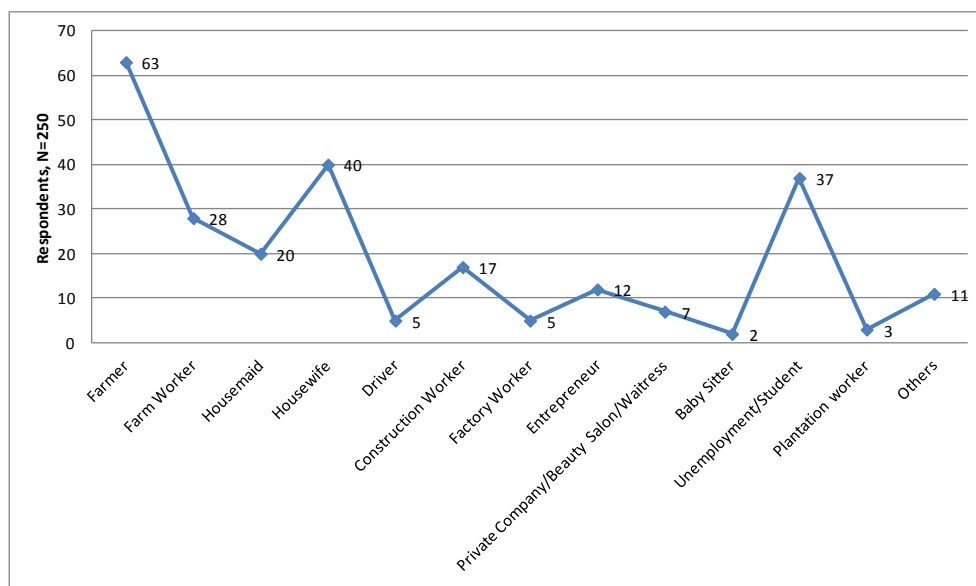


Figure 3.10. Occupation before Migrate

The type of occupation mostly selected by migrant worker during the migration is house maid both in international and domestic migrant (Figure 3.11). The total amount of house maid is 120 respondents (48%), followed by working in a factory 88 respondents (28%), and construction workers, plantation workers, technician, care giver and other works.

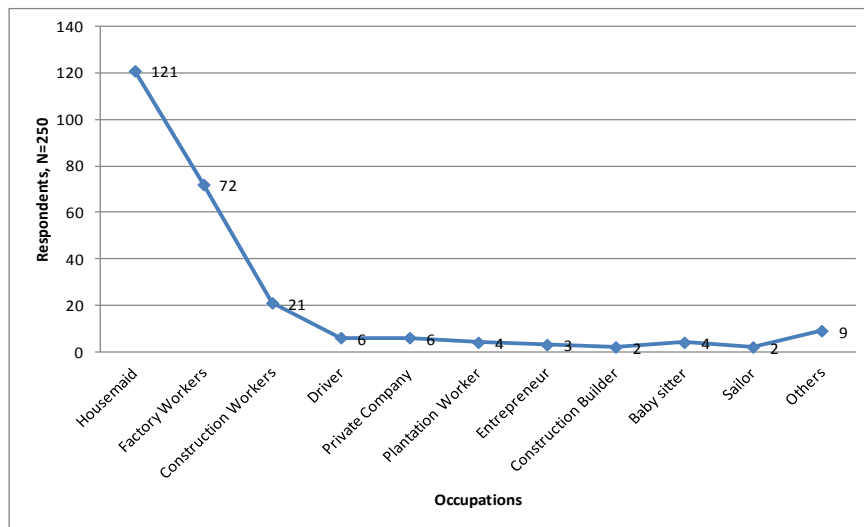


Figure 3.11. Occupation after Migrate

Housemaid does not require high skill or high levels of education, so that every inhabitant in the village could work in this area. However, they must acquire basic proficiency in relevant job activities and specific skills for 3 (three) - 6 (six) months at the training center before migrating.

There are four groups of education background of representative household which encompass (i) elementary school, (ii) junior school, (iii) high school and, (iv) university level. Elementary school has six years of education, whereas junior school and high school have three years. According to education statistic, average years of schooling of adults in Indonesia is 5 (five) years (www.NationMaster.com).

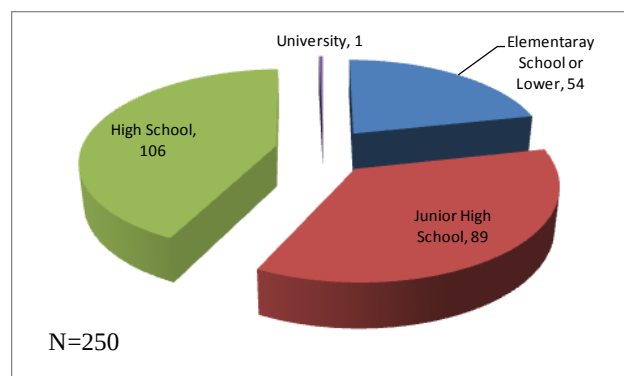


Figure 3.12. The Level of Education of Migrant Workers

Based on figure 3.12, the number of respondents with education background at the level of high school is the highest (106 respondents or 43%). The number of respondents with the level of education at junior high school level is 89 respondents or 35%; in elementary school or even lower, there are 54 respondents or 21 %, and in the level of university, there is only 1 respondent (1%). It may imply that respondents in the research area have education level above the average of education in the national level.

Figure 3.13 explains about the status of migrant as active or former migrant. The status of the migrant respondent as former migrant is more than 50% and active 43%. We interviewed the active migrants directly to the migrant when they were coming back for the holiday to the village, .If they were not in the village, the interview was represented by their family members. For former migrant, we interviewed directly.

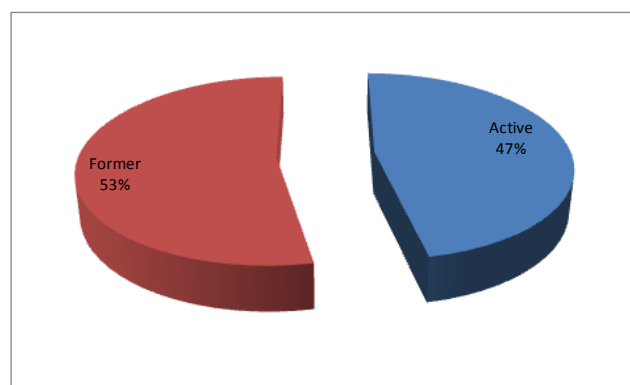


Figure 3.13. Status of Migrant's

Regarding the contract duration, there are 102 respondents or 40.8% (Figure 14) of migrant workers who work more than four years. It means that 102 respondents renew the contract after completing the first contract (two years contract). In general, the international migrant workers have two years contract and can be renewed. Whereas, 45 respondents (18%) work between two-four years contract , which means

that after completing a two-year contract they back to their village. The other respondents work for more than or equal to three years and less than four years (44 respondents or 17.6%), and for less than one year (24 respondents or 9.6%).

These findings support our hypotheses regarding the economic impact to migration decision, where one of the reasons is economic reason. The difference of wages and the duration of contract indicate this relation.

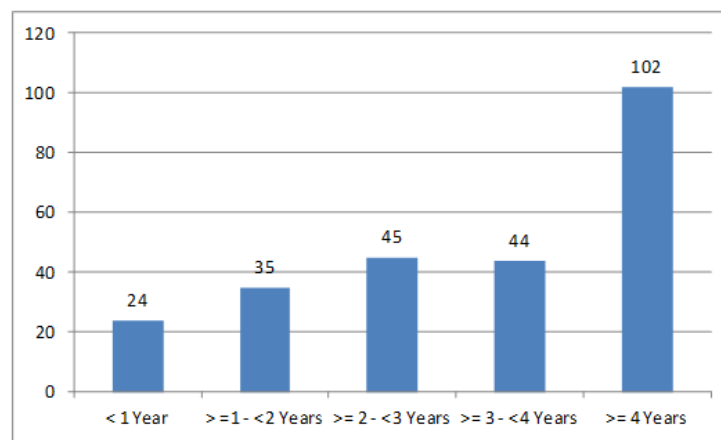


Figure 3.14. The contract duration

3.3.2. Non Migrant Households Respondents

In addition to the migrant households as the object of the research, we interviewed non-migrant households as data comparison. We collected information about non migrant households with the same questions, regarding the individuals characteristics; their feeling to their neighbors and village; and their activity in the community activities. The questions related to individual characteristic are income, the family members, type of work, and education. The questions regarding the social capital are divided into two types, (i) questions related to their feeling for the values and belief to their village and neighbors and (ii) questions related to the activity of respondents in community activities.

In the questionnaire survey, we asked non migrant household respondents to reveal their individual characteristics. By using the same questions for migrant respondents, we asked non-migrant respondents income using 10 categories, such as: (i) less than IDR 500,000 (JPY 5,000), (ii) IDR 500,000 –1,000,000 (JPY 5,000 – 10,000), (iii) IDR 1,000,000 – 1,500,000 (JPY 10,000 – 15,000), (iv) IDR 1,500,000 – 2,000,000 (JPY 15,000 – 20,000), (v) IDR 2,000,000 – 2,500,000 (JPY 20,000 – 25,000), (vi) IDR 2,500,000 – 3,000,000 (JPY 25,000 – 30,000), (vii) IDR 3,000,000-3,500,000 (JPY 30,000-35,000), (viii) IDR 4,000,000-4,500,000 (JPY 40,000-45,000), (ix) IDR 4,500,000-5,000,000 (JPY 45,000-50,000) and the last (x) more than IDR 5,000,000 (JPY 50,000). The minimum wages of Malang Regency (UMR or *upah minimum regional* in Indonesian) as decided by government in 2013 is IDR 1,343,700 or JPY 13,437. This figure shows that the income (Figure 3.15.) is quite similar to non-migrant households in Figure 3.5. This table demonstrates that the income of the respondents is generally still quite low (41 %)which is equal or lower than UMR but higher that migrant households income without remittance. Whilst there are more 50 % of respondents have income higher than UMR. It indicates that the non-migrant respondents have higher income than the migrant household respondents.

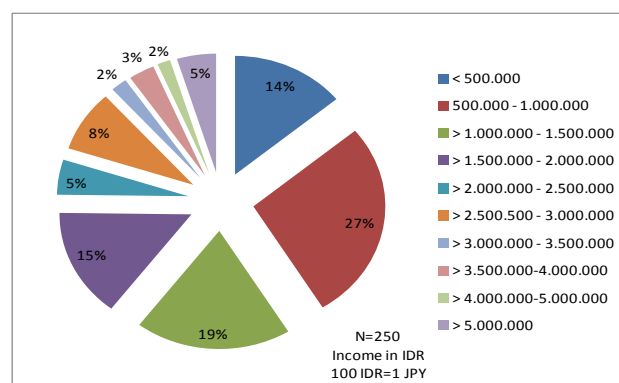


Figure 3.15. The Non Migrant Household Income

Referring Figure 3.16, the most common size of family for migrant household is family with 4 inhabitants who live in the same single housing unit consisting of parents (father and mother) plus one member. Another seven types of family size for migrant household are (i) family with 3 members (26% total households), (ii) family with 5 members (17% households), (iii) family with 2 members (15% households), (iv) family with 6 members (7% households), (v) family with 1 member (3% households), (vi) family with 7 members (1% households), and (vi) family with 8 members (1% households). For the family with six and seven members, the family consists of parents, two children or one child and grandfather and grandmother.

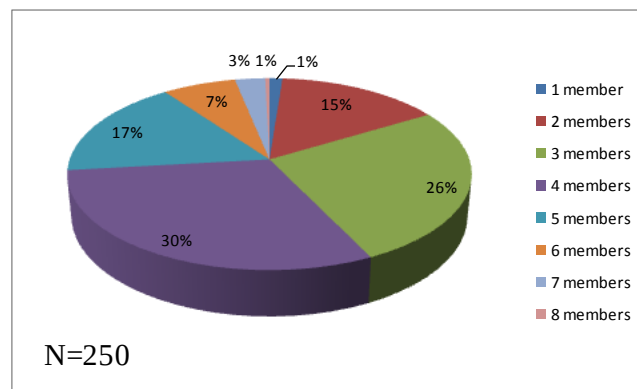


Figure 3.16. The Family Members of Non Migrant Household

The occupation of non migrant is not different from migrant household respondents. Figure 3.17. examines the occupation of respondents, where farmers are the most respondent occupation (66 respondents or 26%), followed by small and medium enterprise (34 respondents 17%) and working in private company around 8% (21 respondents). The others work as farm workers, construction building, driver and etc.

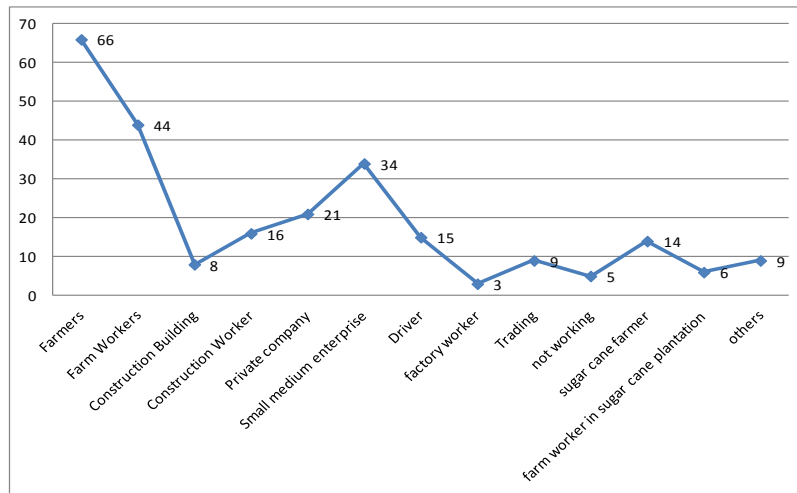


Figure 3.17. The Occupation of Non Migrant Households

In the education level (Figure 3.18), the number of respondents with the education background at high school level is the highest (106 respondent or 43%). The number of respondents with the level of education at junior high school level is 89 respondent or 35%; in elementary school or even lower, there are 54 respondents or 21 %, and in the level of university, there is only respondent (1%). It may imply that respondents in the research area have education level above the average of education in national level.

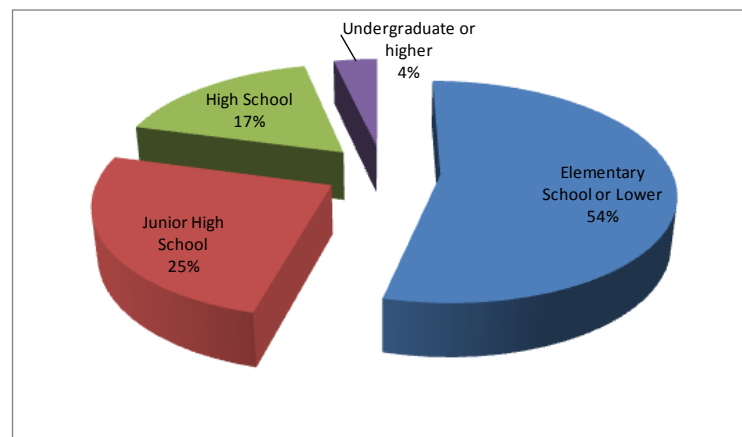


Figure 3.18. Educations Level

3.3.3. The Difference Characteristic between Migrant and Non Migrant

In this section we explained the difference between migrant and non migrant household respondents in demographic attributes.

Income. For migrant households, if we exclude income from migrant remittance in the family, the income of 40 respondents or 16% of the population of the village is below the regional minimum wages or UMR (*upah minimum regional*). 55 respondents or 22% is in the range of regional minimum wages, and the income of 155 respondents or 62% is above the regional minimum wages (Figure 19a). This income is quite similar to non-migrant households in Figure 19b.

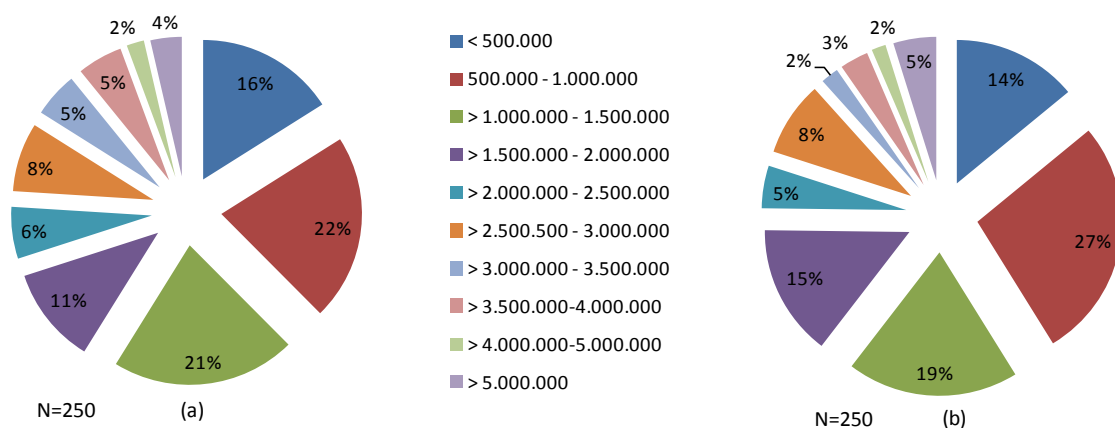


Figure 3.19. Household income without migrant income (a), migrant households (b), non migrant households (in IDR, 100 IDR=1 JPY)

If we include the remittance in the total household income (Figure 3.20), we can see the difference. Households with migrant have higher income than households without migrant. Only 35% of migrant household respondents has income less or the same as minimum regional wages, compared with 60% of non-migrant households.

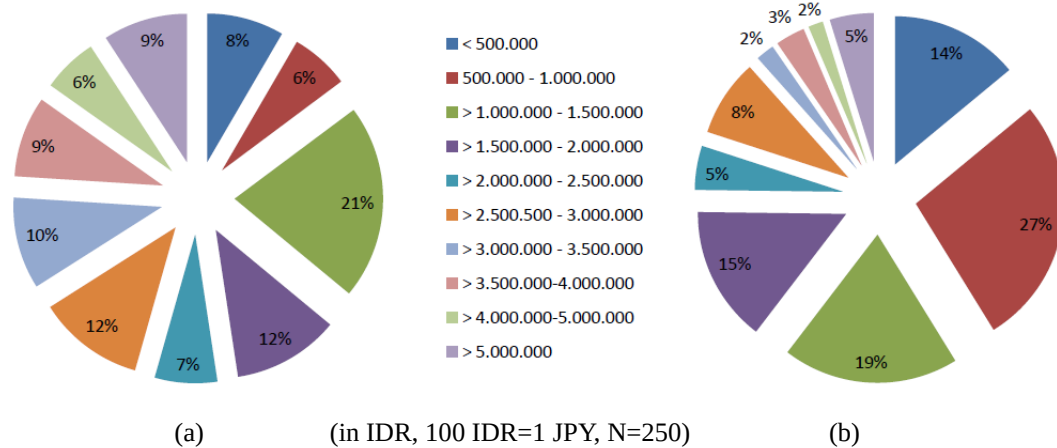


Figure 3.20. Household income with migrant income (a), migrant households (b), non migrant households

Education. Indonesian elementary level has six years of education; then it continues with three years of education in middle school and 3 years in high school. In the survey, we asked respondents about their education background within 4 categories as follows: first option is elementary school covering the head of household who has background of education at lower or equal to 6-year school period. Second option is middle school expressing the head of household whose education is in the junior school whether they completed the school period by three years or just dropped out. Third option is high school with similar circumstances to the middle school. Fourth option is university level – it reflects the head of household who graduates from bachelor degree, master degree and the like. Moreover, if the respondent does not finish the university level or drop out in the mid-term, we may also categorize the education background of the respondent as the university level.

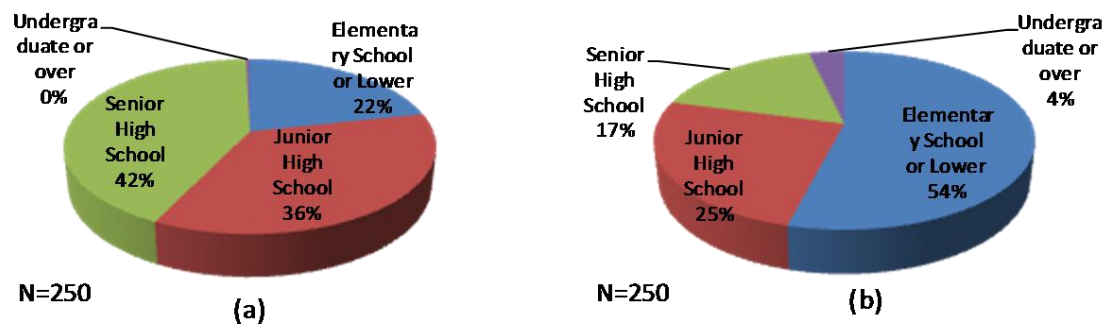


Figure 3.21. Household Education Background

(a) Migrant households (b) non migrant households

The largest number of migrant household respondents' education is high school level of education (105 respondents or 42%) (Figure 3.21a). Those whose education in the junior high school level are 90 respondents or 36% of population; those with elementary school education or even lower are 21.6%, and at the level of university is only one respondent (0.4%). This result suggests that migrant household respondents in the research area have higher level of education than the national average. Non migrant households' education background in elementary school or lower is 54%, which is higher than 21.6% for migrant households. With the values more than 50%, the level of education for non migrant household is lower than the national average level (Figure 3.21b). It explains that migrant households in the research area have a higher level than non migrant households.

Referring Figure 3.22, the most common size of family for migrant household is family with 3 inhabitants who live in the same single housing unit consisting of parents (father and mother) plus one member. Another seven types of family size for migrant household are (i) family with 4 members (69 total households), (ii) family with 5 members (41 households), (iii) family with 2 members (36 households), (iv) family with 6 members (6 households), (v) family with 1 member (5 households),

(vi) family with 7 members (2 households), and (vi) family with 8 members (1 households). For the family with six and seven members, the family consists of parents, two children or one child and grandfather and grandmother.

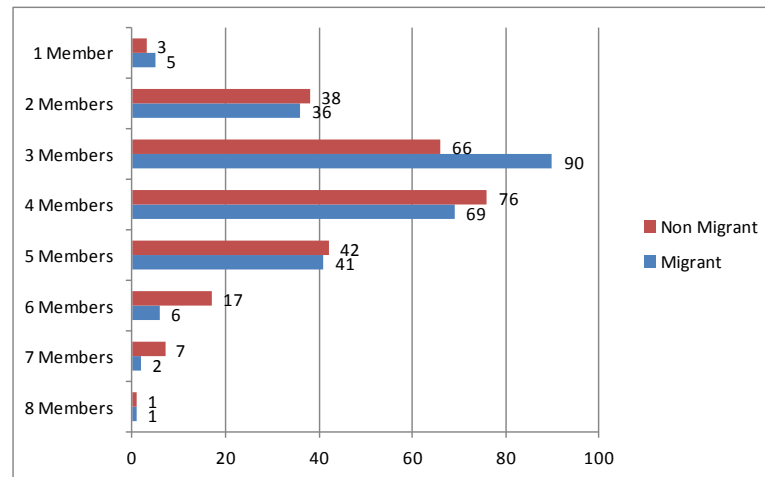


Figure 3.22. Family Members

The most common size of family for non migrant household is family with four inhabitants who live in the same single housing unit consisting of parents (father and mother) plus two members (child or relative). The second size is family with three members, and other types of family members are almost the same as non migrant and migrant households. Comparing to this, the non-migrant households have more family members in average than the migrant households.

3.4.Data related to Social Capital Measurement

There are a number of dimensions to social capital and to measure its level. Standardization in measuring social capital is still far away (Lin 2001). There has been an abundance of ad-hoc measures, often derived from data not specifically designed to measure it but that happened to be available readily for analysis. This has made a thorough and specific testing of social capital theory difficult for structural comparison.

In this chapter, some questions are designed to measure social capital to investigate respondents' feeling about values and belief to their village and neighbors, and their activities in the community activities. The answer of the questions will construct latent variables and observed variables, explained the formation of social capital.

3.4.1. Migrant Respondent opinion about their living environment and neighbors

In this section, the respondents' opinion about the condition of the village, the condition among the people and activities of a respondent in community activities are attempted to investigate. Using a cognitive appraisal scale of social capital, a subjective evaluation toward their living environment (Arjowilangun village) and neighbors is considered. As shown in Table 3.3, the appraisal scale that is, "extremely yes (5)", "yes (4)", "no comment (3)", "no (2)" and "extremely no (1)" for 12 questions on values and beliefs toward the village and neighborhood residents.

1. Place attachment to your village as your hometown;
2. Nature and landscape of your village are nice;
3. Foodstuff of your village is nice;
4. Important to involve in community events activities;
5. Important to consult people who in trouble;
6. Important to keep daily communication with neighbors;
7. Important to respect ancestors and manage community grave;
8. Important to communicate with relatives living in the village;
9. Neighbors are very important for me;

10. Neighbors will take care of my children and my parent when I am going abroad;
11. Neighbors will help me and my family when we have some economic troubles;
12. Want to continue living in this village.

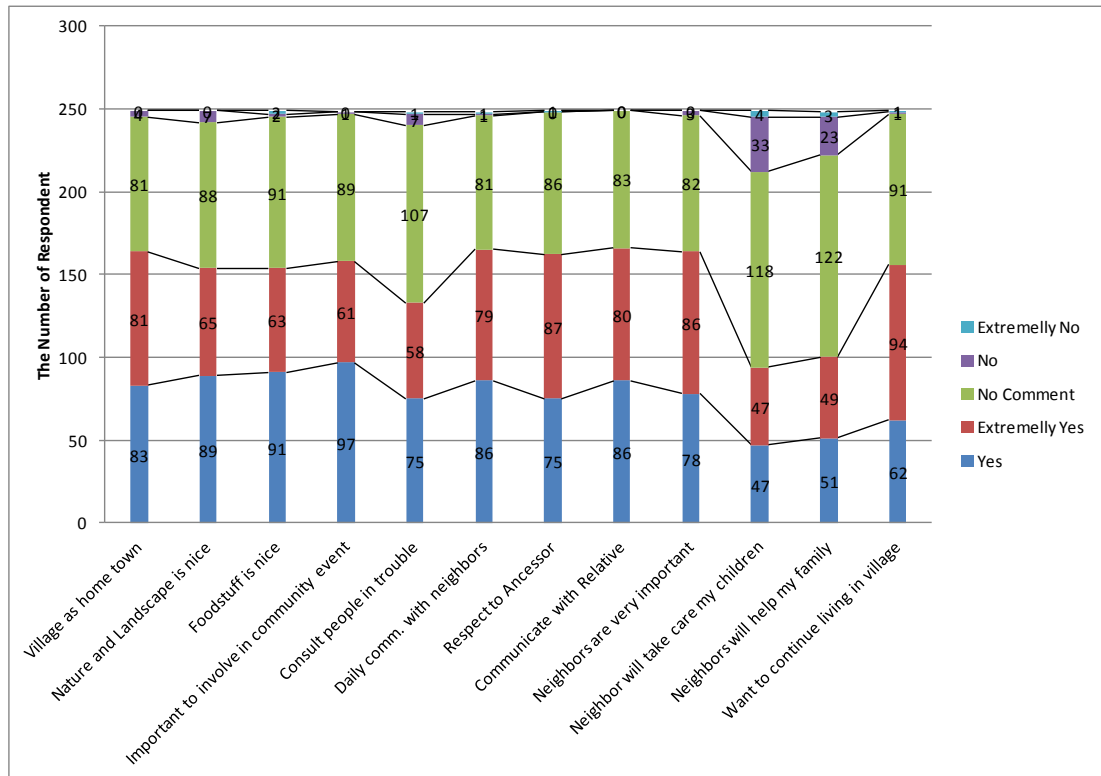


Figure 3.23. Social Capital construct from questions

In response to the questions about the village as home town, almost 165 respondents or 66 % answered yes and extremely yes (Figure 3.23). This means that most of the respondents are proud of the village. No one answered extremely no and only 4 respondents or 1.6 % answered “no”. 32.4% or 81 respondents answered “no comment”.

From 12 (twelve) questions related to their feeling to their village and neighbors, most of the respondents answered “yes” and “extremely yes”. For the questions whether the neighbors will take care of the children and parent when going abroad”

and whether the neighbors will help the family when having some economic troubles, the respondents answered “no comment” more than “yes” and “extremely yes”. It is normally understood that in the cultural village with an average income of inhabitants is small; it is difficult for them to share with their neighbors to keep children and parents, as well as to help neighbors who have problems related to the economy. For the last question about living in the village, it seems that they still want to continue living in the village even though they once lived abroad.

3.4.2. Migrant Respondent Activity in the Community Activities

In this section, the activities of the respondents in the community were measured by using the answer of the question “did you participate or not in the community activity?” and the answers are “yes” or “no”. If the respondents answer “no” it means that the respondents do not participate in the community activity, and if they answer “yes” it means they participate. The questions for these activities are:

1. Village, hamlet or community meeting;
2. Village cooperative meeting;
3. Religious activities (Muludan, Ramadhan, sedekah and etc.);
4. Cultural festival;
5. Working together to clean street, pavement local road and etc.;
6. Sport event on independence day (on 17 August every year);
7. Social Gathering (Kenduri, Arisan);
8. Food services (give food for the others);
9. Tradition (Rewangan/helping each other when someone have party, Nyumbang/give donation);

- 10. Helping elderly people;
- 11. Political Party;
- 12. Union Labor;
- 13. Others activities.

Based on the questions, the level of respondent activities in community activity is divided. There are nine (9) questions in village level for the question number 1, 2, 4, 5, 6, 9 and 11 and 12, and for the hamlets level five (5) questions are 3, 7, 8, 10 and 13.

Referring the question about the village or district meeting, village community meeting (MUSRENBANGDES) and development planning meeting (MUSREMBANGCAM) are conducted only once a year, whereas in the village level there are some meetings related to the village monthly activities. In respond to the questions about cooperative meetings, the inhabitants have regular monthly meeting.

The religious activities, such as Muludan (commemorating the birth of Prophet Muhammad SAW), Grebeg Ramadhan (ceremony before Ramadhan), have been done annually. In relation to question number 4, cultural festival like “Bersih Desa” is an annual activity for all people in Arjowilangun village. Working together to clean the street and the pavement of local road is the monthly or annual activity as question number 5.

Sport event on Independence Day (on 17 August every year) is an annual activity at the village level as stated in the activity number 6. It is different from other activities as social gathering (Kenduri, Arisan), food services (give food for the others), tradition (Rewangan/helping each other when someone has party, Nyumbang/give donation) and helping elder people that can be done every day.

Joining political party should be done every time, because they need to meet the constituent to increase the number of the members. If the people join an union labor organization they should attend the monthly meeting. The respondents also have any other activities beside the above mentioned twelve activities. Their activities are varied depending on the respondents' answers.

Based on the interview, it can be seen that most of the respondents answered “yes”; . The respondents do not want to participate in other activities. There are 246 respondents who feel reluctant to participate in the community activity and there are 4 respondents who are willing to participate in the community activity.

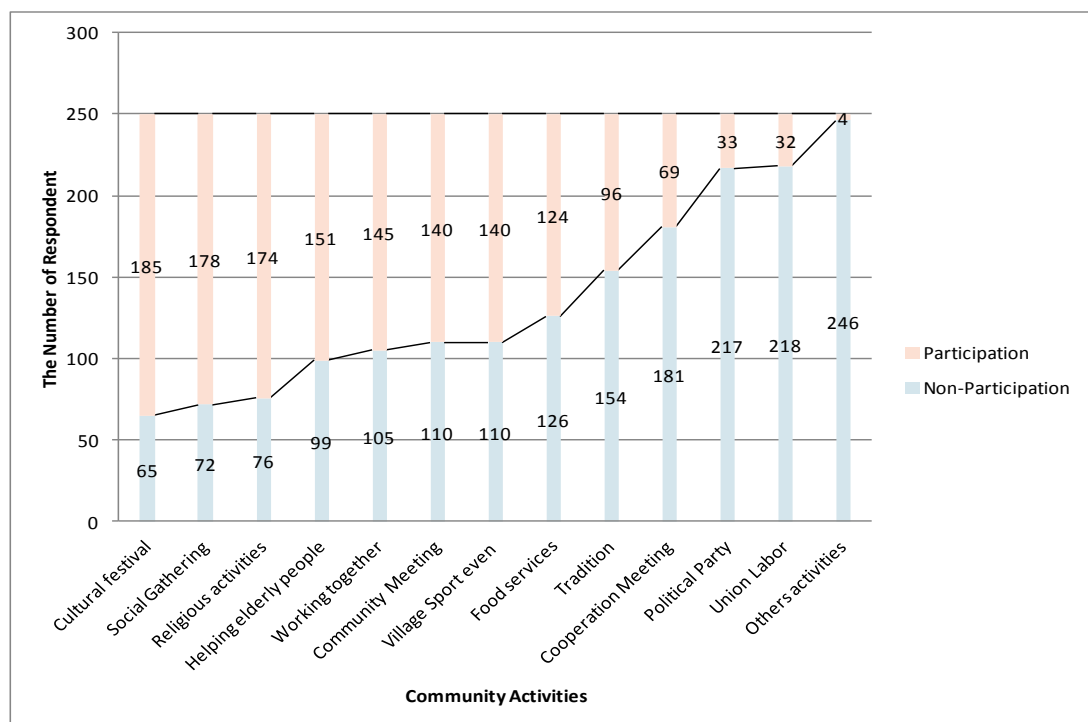


Figure 3.24. Activity of Respondent on Community Activity

The respondents would like to involve themselves in other activities, except for cooperative activities meetings, tradition (giving donation and helping neighbors), political party, and unions labor (Figure 3.24). The number of respondents who want

to participate is less than the number of respondents who do not participate. The cultural festival like “Bersih Desa” that only happens once a year attracts so many respondents to participate (185 respondents).

3.4.3. Descriptive Statistics

In this section, we attempt to measure the relation between social capital and respondents’ answers of the questions. First, we measure this relation with a set of questions. There are 12 questions to describe respondents’ opinion about their values and belief about their living environment using 5 scales in which 5 means very much (extremely yes) and 1 means the least (extremely no). Second, we have measured the activities of the respondents in the community by using their responses in the question whether they participate or not in the community activity and the answers could be “yes” or “no”. If the respondents answer “no” it means that they do not participate in the community activity. Otherwise, if they answer “yes” it means they participate. We employed descriptive statistic in SPSS to calculate the relation.

The primary data throughout this chapter is employing this question in the questionnaires surveys and making the same calculation to measure the relationship between the demographic attributes with the answers of questionnaire questions by the respondents. Migrant respondents were asked the demographic attributes about their income, sex, age, education, type of migration and duration of work.

In this section, we only used migrant respondents’ data to explain the relationship between each demographic attribute with values and belief to the village and neighbors; and with activity of the respondents in community activities.

Table 3.2 depicts the best result of cross tabulation test for the relation of demographic attributes for 12 questions related to values and belief to the village and

neighbors. The result indicates, for the sample size of 250 respondents (migrant households), that type of migration and income has strong relation with almost of the answers of the questions (the value of chi-square test less than p values < 0.05). It means that type of migration and income could influence the decision of respondents to answer the questions (Y1-Y12). Another attributes such as family members and occupation have significant value only with activities numbers Y4, Y5, Y6, Y11, and Y2, Y3, Y12 respectively, and for attributes education and gender have no relation.

Table 3.2. Chi square test (Pearson value) between demographic attributes and 12 questions related to values and belief to the village and neighbors

Attributes	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12
Education	0.407	0.712	0.419	0.708	0.102	0.944	0.845	0.577	0.95	0.451	0.998	0.899
Income	0.047	0.003	0.033	0.024	0.337	0.365	0.217	0.125	0.348	0.204	0.027	0.18
Type of Migration	0.017	0.151	0.012	0.026	0.029	0.015	0.011	0.023	0.086	0.277	0.277	0.283
Family members	0.095	0.255	0.456	0.001	0.035	0.042	0.538	0.132	0.299	0.452	0.02	0.069
Occupation	0.337	0.01	0.01	0.706	0.836	0.693	0.972	0.084	0.398	0.212	0.319	0.02
Gender	0.139	0.417	0.44	0.506	0.45	0.124	0.405	0.073	0.136	0.392	0.5	0.071

Figure 3.25. presents the relation between education and the importance to consult people who are in trouble or Y5 (the value of Pearson chi square 0,102, closest value to $p < 0.05$). From this figure we can see that elementary school or lower and junior high school respondents gave a no comment response as the highest. For those whose education backgrounds are high school and higher level provide the answer of yes and extremely yes as the highest. It indicates that there are some relations between education level and the respondents' answer to the question.

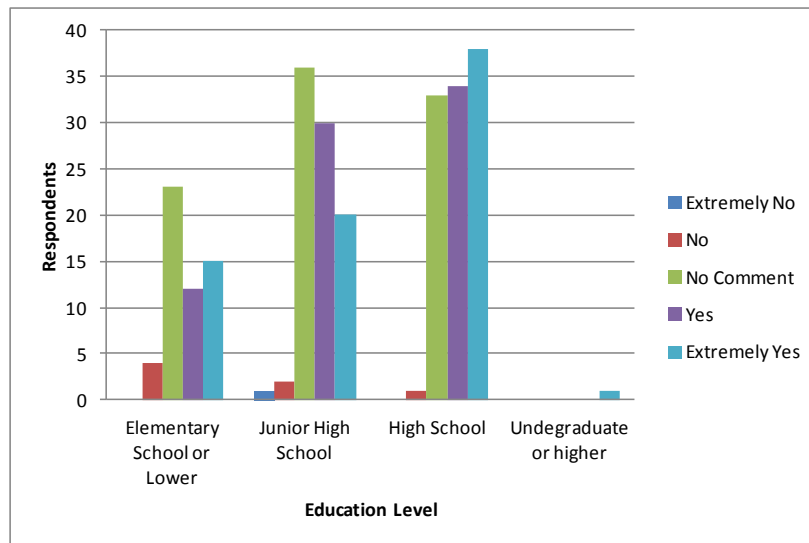


Figure 3.25. The relationship between education and Y5

Figure 3.26. below depicts the relation between income and respondents' feeling about their neighbors (question no 11 or Y11, Neighbors will help me and my family when we have some economic trouble). The value of Pearson chi square is 0,027 less than the p value ($p < 0.05$), it means that the income has relation with the feeling of their neighbors. Even though most respondents answered 'no comment', the result of chi square test shows the significant value. Consequently, we can conclude that the income has relation with respondents' answer about their neighbor who will help them when they face some difficulties. It is common in rural area that people will help each other.

The next, Figure 3.27. illustrates the relationship between type of migration and place attachment to their village (Y1). The value of Pearson chi square in the cross tabulation analysis is 0,017 less than the p value ($p < 0.05$), it means that the type of migration has relation with place attachment to their village.

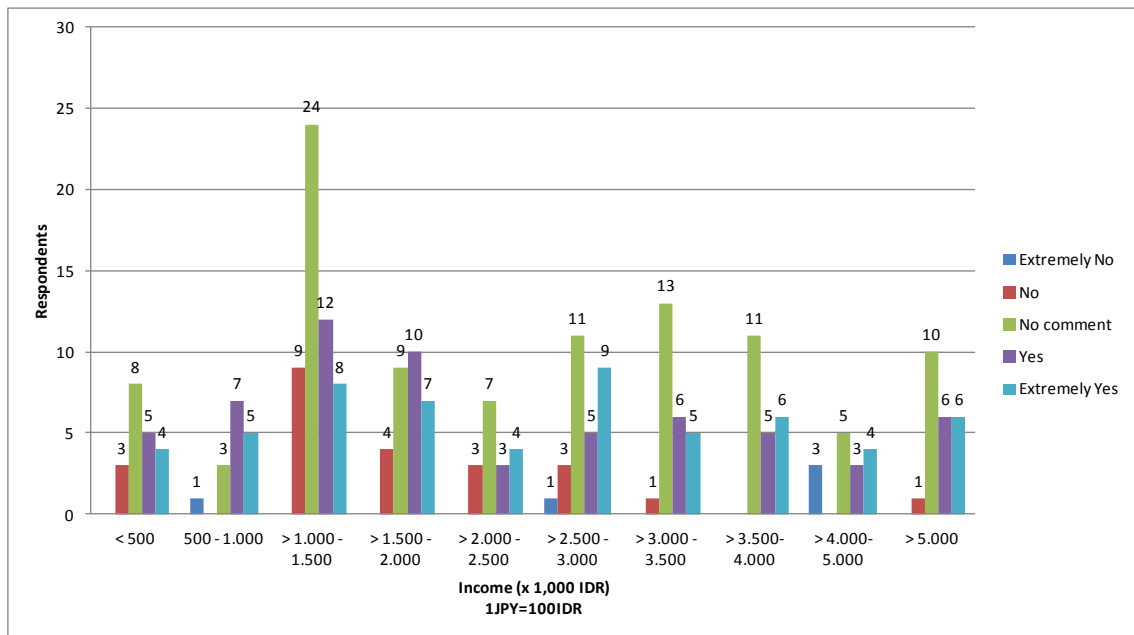


Figure 3.26. The relation between income and Y11

International migrant workers have more ties to their village than local migrant workers. The majorities of international respondents provide response of yes and extremely yes rather than no and no comment response.

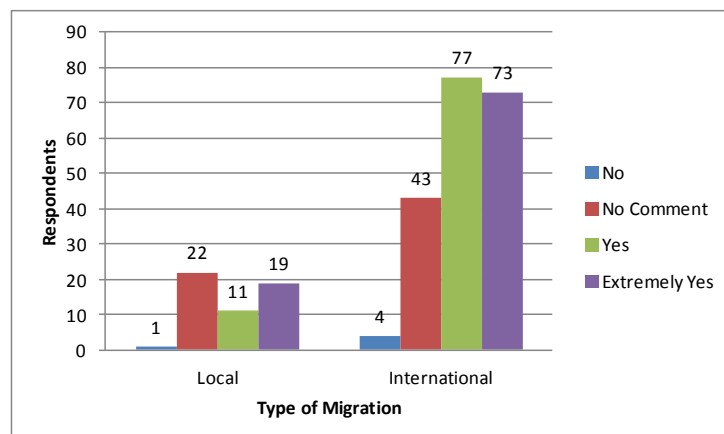


Figure 3.27. The relation between type of migration and Y11

The relation between demographic attributes and activities in the community is shown by the calculation of cross tabulation (Table 3.3.). The respondents were asked about their activities in the community, and the activities are divided as: the activities no 1 (ACT1) is village, hamlet or RT/RW meeting; ACT 2 is village

cooperative meeting; ACT3 is religious activities (praying in mosque, muludan, Ramadhan, sedekah and etc.); ACT4 is cultural festival; ACT 5 is working together to clean street, pavement local road and etc.; ACT6 is sport event on independence day (on 17 August every year); and ACT7 is social gathering (Kenduri, Arisan).

The result of the calculation using cross tabulation data (Table 3.3.), the chi-square test shows that the value of Pearson's Asymp.Sig (2-sided) less than 0,05 are in type of migration with ACT4, and ACT5, family members with ACT 3 and ACT 4, and gender with ACT 6 and ACT7. For demographic attribute: income, education and family, members have no significant values. From this result, we may conclude that the relation between demographic attributes and activities of the respondents in community activities are not significant or independent.

Table 3.3. Chi square test (value Pearson chi square) between Attributes Data and Activities in the community (activities 1-7)

Attributes	ACT1	ACT2	ACT3	ACT4	ACT5	ACT6	ACT7
Type of Migrant	0.131	0.131	0.959	0.006	0.048	0.508	0.008
Income	0.284	0.333	0.567	0.449	0.301	0.241	0.847
Education	0.038	0.84	0.414	0.323	0.649	0.188	0.428
Family members	0.493	0.293	0.079	0.094	0.316	0.449	0.926
Occupation	0.177	0.169	0.298	0.63	0.457	0.376	0.678
Gender	0.364	0.278	0.367	0.277	0.025	0.012	0.01

Based on the results above, we attempt to examine the relations between demographic attributes with each community activities (only for the significant result of chi square test). We measure the relation between type of migration and activities no 4 (ACT4) shown in Figure 3.28. From two types of migration, the number of respondents who want to participate in the community activities (cultural festival) is more than the respondents who do not want to participate. The cultural festivals are the famous annual event in Arjowilangun village. One of cultural festivals is "Bersih

Desa”. It is a once-a-year festival which attracts many respondents who are involved in the activity together with their kith and kin. Even though the respondent are still working abroad, they tend to participate by sending the money to support this event.

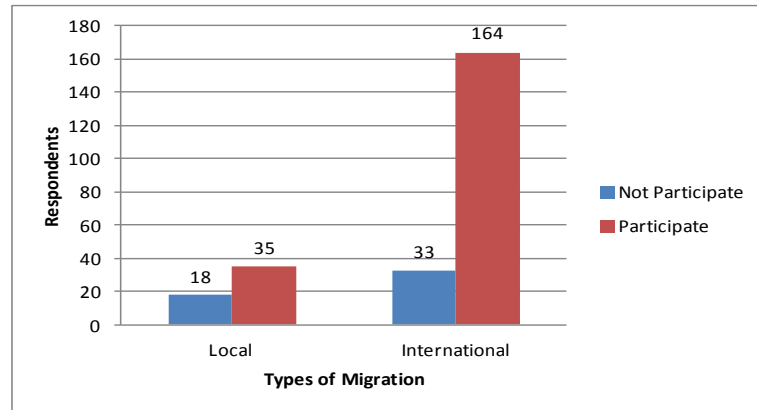


Figure 3.28. The relation between types of migration and ACT 4

The result of analysis between the relation of family members and activities number 3 (ACT3) religious activities is shown in Figure 3.29. The values of chi-square test is χ^2 equal to 0,079 (df = 2, N = 250) = 14.21 at p = 0.79). This value is not exceeding the table critical value of chi square test $p < 0.005$, but closes to the critical value. Hence, we conclude that the respondents who want to join the religious activities are dependent.

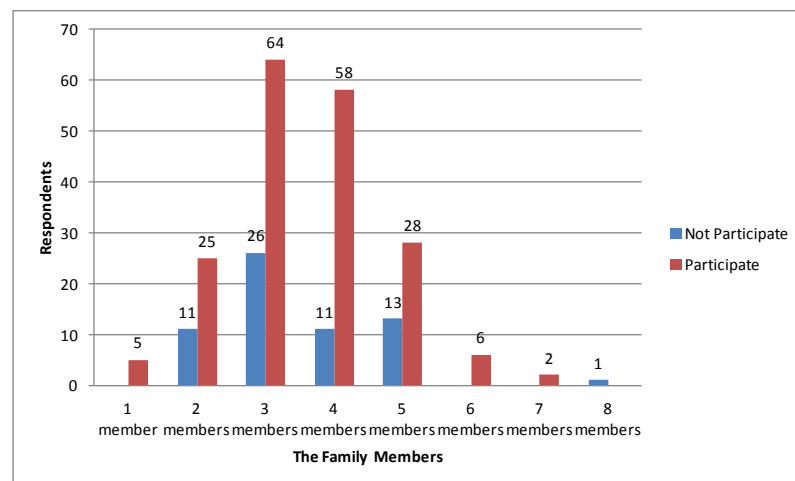


Figure 3.29. The relation between family members and ACT 3

Furthermore, Figure 3.30. depicts the relation between type of gender and ACT7 (social gathering). The number of female respondents is more than the male respondents in the research area. The values of the chi-square test is χ^2 equal to 0,001 (df = 2, N = 250) = 14.21 at p = 0.01). This value is exceeding the table critical value of chi square test $p < 0.005$, and it indicates that gender choice whether to participate or not is dependent.

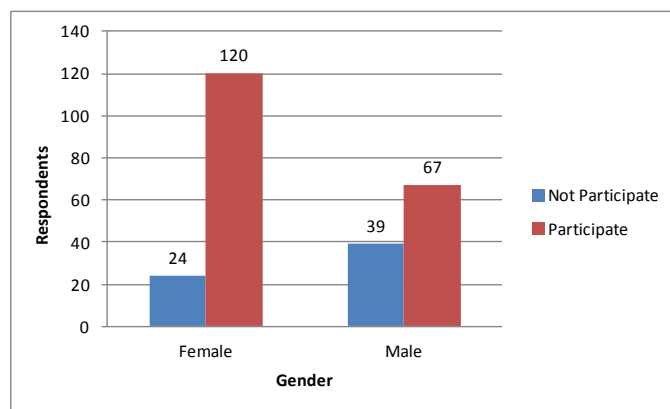


Figure 3.30. The relation between types of gender and ACT7

In this section, some characteristics which have significant value to the indicator of social capital measurement are outlined. The analysis explains that social capital level indicates the more migrants are abroad.

3.4.4. Non Migrant Respondents' opinion about their living environment and neighbors

Using the same type of questions, we interviewed non-migrant respondents. This result shows that for question no 13 (Y13) about whether they continue living in the village, most of respondents responded positively to continue living in their village by answering the choice extremely yes and yes (94.4%). Since they do not have any intention to migrate, they seem want to live in their village forever (Figure 3.31

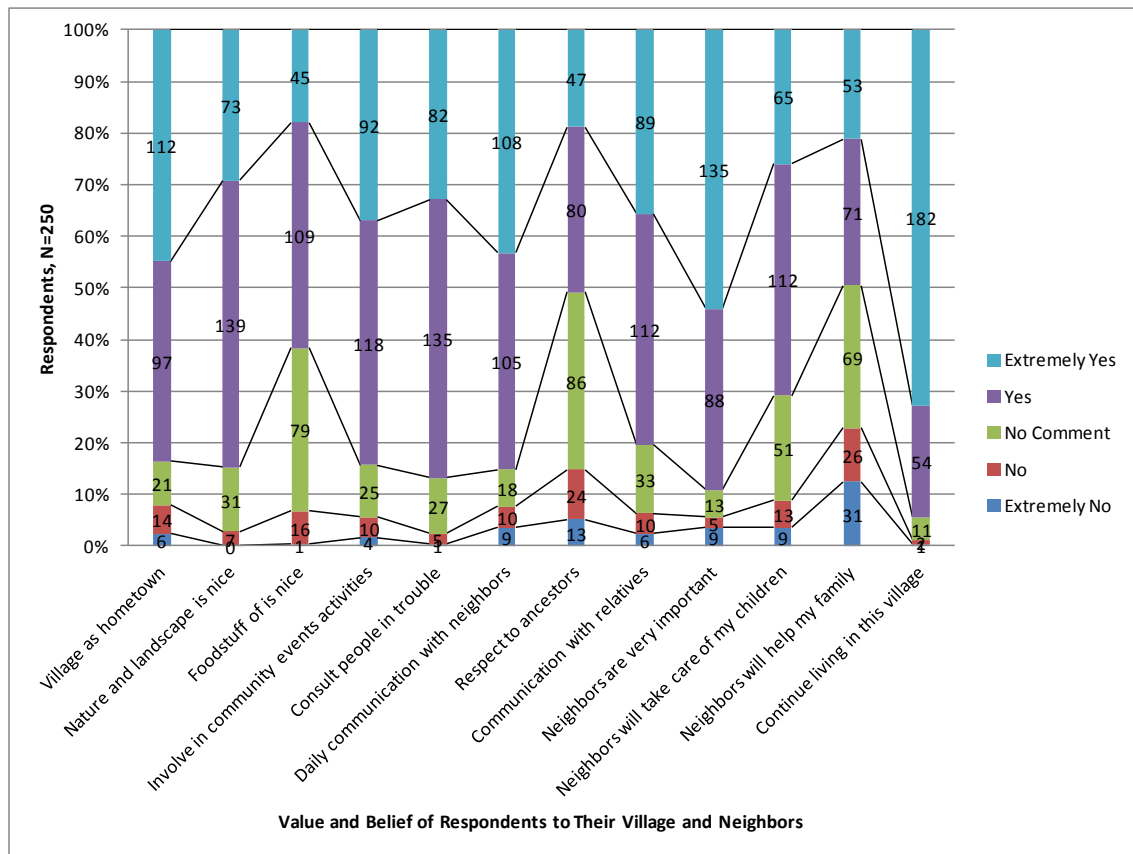


Figure 3.31. Value and Believe to their living environment (village) and neighbors

Figure 3.32. points out that religious activities are the highest activities they want to participate for non-migrant households. Religious group encompasses a collection of residents who voluntarily establish a community group whereby the main purpose is to deepen understanding of religion. Since the religion of most of the residents is Islam, in general, they have weekly meeting for recitation of Holy Qur'an. It is usually conducted on Thursday night after Isha pray which is alternately done in the house of group members. Periodically, they also organize special meeting where they learn together on how to take care of Muslim corpse. Workings together and cultural are the other most respondents' participated activities.

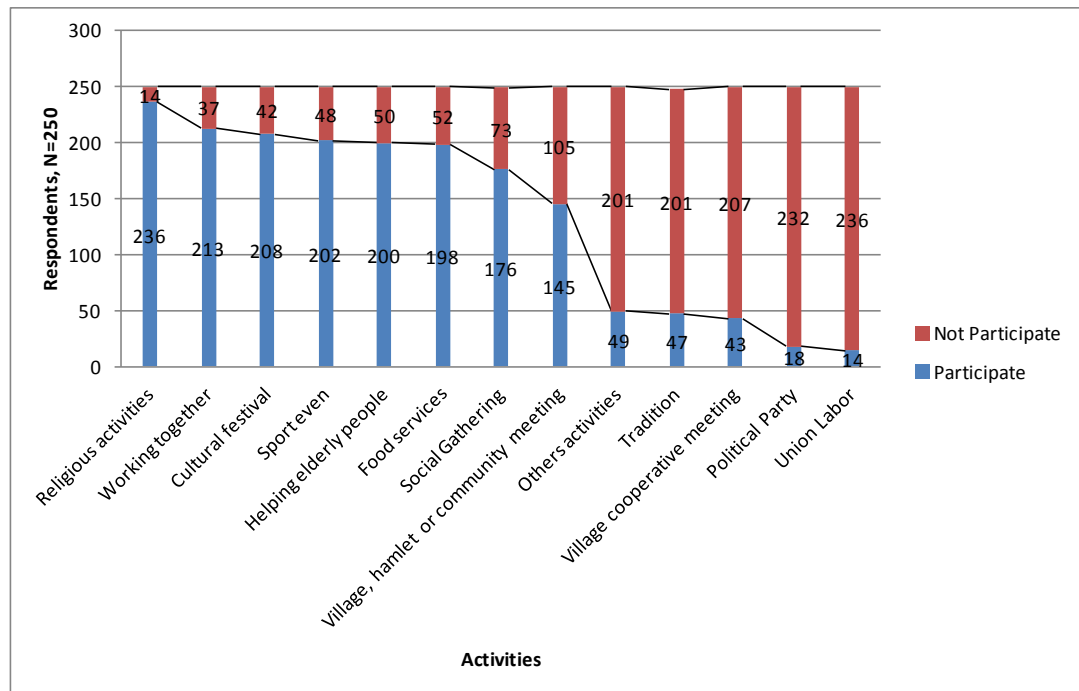


Figure 3.32. Activity of Respondents on Community Activity

From this data, we may conclude that those households or respondents who join frequently to the community activities may have higher relationship related to social capital. Furthermore, those who have higher social capital for non-migrant households seem want to stay more.

3.5. Summary and Conclusions

This chapter describes the result of field survey in Indonesia rural area, covering design of the survey, demographic attributes, migration and non-migrant household characteristic. The main objective of this chapter is to capture suitable perspective of migration and related issues from empirical case in Arjowilangun village, Kalipare district, Malang regency, East Java province, Indonesia. The demographic characteristic of respondents consists of 6 attributes, such as: income, sex identity,

education background, occupation, family members, and duration of contract.

Face to face questionnaire interview survey method was conducted in two periods in November 2012 and February 2014. Through systematic sampling, 500 selected respondents are the husband, the wife or the head of family chosen so as they represent the typical precious inhabitants. Hence, the results and the substantial assessments replicate the essential characteristics of the contacted people. Referring the Instruments of the Social Capital Assessment Tools developed by World Bank (2004), Jeong et al (2011) research and with the combination of preliminary observation survey, we developed household questionnaire survey which consists of three parts. They are as follows (i) To explore demographic characteristic of respondents; (ii) To investigate the social capital level by using questions about values and belief to the living environment and neighbors; and (iii) To investigate the community activities. The selected respondents live in five hamlets covering Pangganglele, Lodalem, Lotekol, Duren and Barisan.

For migrant households, if we exclude income from migrant household remittance, the income of 40 respondents or of 16% of the population of the village is below the regional minimum wages, that of 55 respondents or 22% is in the range of regional minimum wages, and 155 respondents or 62% has income above the regional minimum wages. This income is quite similar to non-migrant households.

The number of male respondents is much more than the female respondents in the village area covering 54% household respondents in the five hamlets. The majority of migrant households comprises of 3 family members who live in the same house (56% from total households), and non-migrant consists is 4 family. The maximum number of family member for each household in the villages is 8

members.

The level education for the most number of migrant household respondents is high school level of education (105 respondents or 42%) (Figure 3.19a). Those with junior high school level education are as many of 90 respondents or 36% of population; those with elementary school education or even lower are 21.6%, and at the level of university is only one respondent (0.4%). For non-migrant households, their education background in elementary school or lower is 54%. It can be concluded that the respondents have lower level of education than the national average.

Using Chi-square test with the table critical value $\chi^2 = 3.84$ at $p < 0.05$ with $df = 1$, we scrutinized the relationships between respondents choosing to migrate or stay with total data (N=500). There are 4 significant attributes whether to migrate or not as follows:

- Occupation seems not related to the decision to migrate ($p > 0.005$), $\chi^2(df = 1, N = 500) = 1.801$, at $p = 0.18$. It indicates that occupation in agriculture sectors (we set 1 for it and others occupation as 0) and choice to migrate are independent. It means that occupation before migrating does not have any implication to respondents' migration decision. They seem could work in any sector in migrant country; depending on the job opportunity there.
- The critical value of education level of the respondents shows $\chi^2(df = 1, N = 500) = 57.80$, at $p = 0.001$. In migrant respondents, there are only 54 respondents who have education background of elementary school or lower (21.6%). Whereas for non-migrant households, the number is higher, there are 136 respondents or 54.4 percent. Since almost less than half of the respondents

have lower level of education in elementary school, we propose dummy variable for respondents with level of education lower than or equal to elementary school as 1, and 0 otherwise. The critical value of level of education of the respondents shows at 57.8 which is exceeding the critical value. It indicates that education background and choice to migrate are dependent. In other words, it can be stated that respondents with higher education level have higher tendency to migrate.

- In the questionnaire survey, the respondents were asked to reveal their household monthly income, divided into seven categories. The minimum wage in Malang Regency (UMR), as decided by the government in 2013, is IDR 1,343,700 or JPY 13,437. Based on this, we propose dummy variable for respondents with level of income lower than IDR 1,500,000 as 1 and 0 otherwise. The critical value of level of income respondents shows at 0.08 which is not less the critical value (0.05). Therefore, income is independent for decision to migrate or not.
- We divided family members in the research are as: (i) family with 1 member, (ii) family with 2 members, (iii) family with 3 members, (iv) family with 4 members, (v) family with 5 members, (vi) family with 6 members (vii) family with 7 members and (viii) family with 8 members. Average number of family in the household is 4 members. We used dummy for less than 4 members as 1 and 0 otherwise. The critical value of family members of the respondents shows $\chi^2(df = 1, N = 500) = 3.367$, at $p = 0.057$. Similar to income, it is indicated that family size and choice to migrate are independent.

In general, based on the questions related to their feeling to their village and neighbor, villagers in Arjowilangun think that their community and living environment are meaningful and precious for them. Moreover, villagers have a great

interest to their area and their community, so they want to live in their village forever.

Based on the questions about their activity in the community, both respondents (migrant and non-migrant) answered that they want to participate in community activities. However, for political activities, union labor, tradition and cooperative meeting they are not interested to participate. It is due to the fact that these activities are for more specific groups than public activities.

It can be concluded that for migrant respondents, they want to participate to community participation more frequently, and it also indicates the higher level of social capital. Respondents with higher social capital have intention to send migrants workers. Respondents would invest in social capital or in human capital when they are young and the decision to migrate or stay in the second period of live (or when they are adult). If they choose to migrate in second period they will return, because they have contract to work in average for 4 years.

These results in this chapter have implication that for migrant household respondents support hypothesis 1 (communities and households with higher social capital tend to send their family members as migrant workers). Moreover, the theoretical model to support the idea that “households with higher social capital tend to send their family members as migrant workers” is developed in the next chapter. After developing the theoretical model, this model is tested by employing the data in the next chapter.

Bibliography

- International Labour Organization (ILO), 2013. Labour and Social Trends in Indonesia 2013: Reinforcing the role of decent work in equitable growth. International Labour Office Jakarta: ILO, 2013
- Israel, Glee D., 1992. Determining Sample Size. Program Evaluation and Organizational Development, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: November 1992.
- Patton, M. (1990). Qualitative Evaluation and Research Methods. Beverly Hills, CA: Sage. 1990. p. 169-186.
- Patten. Mildred L. 2005. Understanding Research Methods: An Overview of the Essentials. Pyrczak Publishing; 5 edition. May 2005.

Chapter 4

SOCIAL CAPITAL AND TEMPORAL MIGRATION DECISIONS

4.1.Introduction

The literature on social capital, which has grown exponentially during recent years, reveals an imbalance between the volume of publications and the relative lack of progress in measuring the concept. Using “social capital” as a key word in Google Scholar now suggests over 3,430,000 articles or documents containing the phrase. Given the quantitative tradition of Economics, this contrast is even more striking, as economists have not so far made any significant methodological contributions to the measurement of social capital.

Social capital is a wide concept, and hence it can be represented by a wide variety of proxies or theoretical representations (Sequeira and Lopes, 2011). So, it can have different impacts on the economy. The concept of social capital brings to the economic literature influences of both sociology and political science. It can be defined as a characteristic embedded in a given society, as in Putnam et al. (1993): “social capital . . . refers to features of social organization, such as trust, norms, and

networks that can improve the efficiency of society by facilitating coordinated actions.” Further work on this type of social capital is included; for example, in the already vast literature on the effects of social networks, modeled as an asset in economics. Contrary to this definition, social capital has been studied as a characteristic of the individual that also contributes to the evolution of the society, as in the work of Glaeser et al. (2002) and Fang and Loury (2004, 2005). The social capital at the individual level can be defined as the social attributes of the individual, such as social skills and belonging to social networks.

As one of the potential sources of growth in economy, social capital in most of the literature are centered on the empirical level. One of the empirical evidence, it is shown in the World Values Survey. This survey covers 29 market economies and is based on the construction of a measure of trust. The World Bank (2006) also defines trust as a measure of social capital, as well as the ability of people to work together to achieve common goals. The World Bank uses social capital as one of several types of capital, which it uses to calculate intangible capital. It also studies the relationship between the different types of capital (among them social capital) and economic growth. Among other studies, Knack and Keefer (1997) establish a causal relationship between trust and growth, but do not find a very robust association. Temple and Johnson (1998) use several measures of social capital and compose an index, finding those measures useful for predicting economic growth. Most followers in empirical studies estimate a robust relationship between social capital and growth (Beugelsdijk et al. 2004; Rupasinga 2000; and Whiteley 2000) but with a wide interval of point estimates. Empirical studies also have focused on the interaction between social capital and income, such as Fukuyama (1995), Narayan and Pritchett

(1999), Putnam et al. (1993), and Robison and Siles (1999), also using the definition of social capital at the aggregate level.

However, some literatures to date have addressed the contribution of social capital in economic growth in the theoretical framework. Social capital in these literatures, modeled on individual and aggregate levels. One example is Growiec and Growiec (2012) found that the ease of forming new interpersonal contacts (that is, bridging social capital) is proportional to the pool of contacts one already has and the pool of people with whom one is not yet acquainted but might consider being. The size of this pool is in turn determined by the total number of people in the society and, most importantly, by the level of social trust. Bartolini and Bonatti (2008), using an endogenous growth model, found a negative correlation between the expansions of market related activities and social capital, and in their model economic growth and social capital have a negative relationship. Moreover, this model accounts for the fact found by Putnam (2000), according to which social capital has been declining in the US, although the country has been growing. However, most other previous works modeled social capital as an accumulable asset that contributes to production (that is Bisin and Guaitoli 2006; Glaeser et al. 2002). Antoci et al. (2007, 2009) modeled a negative relation between the stock of social capital and economic growth, since time dedicated to market activities steals time away from social related activities, i.e. decreasing the amount of time people dedicate to invest in social capital.

A less developed issues, but still very important is the interaction between human capital and social capital in economic growth. Where the dimensions of social capital used in these studies is usually at the individual level. Glaeser et al. (2002) found a strong empirical relationship between human capital and membership of a given

social organization (the proxy used to measure social capital). Glaeser and Redlick 2009, presented a theoretical framework for the analysis of the determinants of social capital. This starts from the analysis of both consideration on how social capital is formed using a model of optimal individual investment decisions and the social capital accumulation process.

We are considering between the relation of social and human capital in the migration decision model. This is the main focus of our study, and it is still scarce in the theoretical literature: to our knowledge, this has only been done in the working paper of Bisin and Guaitoli (2006) in an overlapping generations (OLG) framework, working paper of Gentili and Ferreti (2012) and working paper of Agénor and Dinh (2013). In Bisin and Guaitoli (2006), they are concerned with the different roles that human and social capital have in rural and urban societies. Agénor and Dinh (2013) are study the links between social capital, human capital, and product imitation (or implementation innovation), in an overlapping generations (OLG). Gentili and Ferreti (2012), explains dynamic migration with a particular focus on the accumulation process that causes a variation in the distribution of income in OLG model.

Our contribution follows these empirical and theoretical references in considering both social and human capital in the decision choices (migrate or stay) as a single theoretical framework. Our analysis is different with Gentili and Ferreti (2012) because we didn't not use dynamic migration model. The different with Agénor and Dinh (2013) that human capital is produced using human capital allocated to the education sector and the total amount of social capital, we follow Bisin and Guaitoli (2006) that the growth of human capital can be accompanied by a loss of social

capital or otherwise. Our approach stresses the economic aspect in two senses: first, by modeling social capital as a result of an investment process or accumulation among individuals, which responds to the logic of maximizing individuals' expected utility; and second, by considering that economic relationships are fundamental to generate social capital in economies theory maximization they will decided between migrate or stay.

This chapter is structured as follows. The second section sets out the reason why we use overlapping generation model, third section describes the principal assumptions on which the proposed measure of social capital is based on economic theory overlapping generation model. In the fourth section we develop the theoretical model, from which we obtain an expression that allows the aggregated social capital stock from investments. The relation between social capitals investments in individuals and decisions (migrate or stay) explain in this section. And the last in the fifth section is summary and conclusions.

4.2.Overlapping Generation Model

This chapter employed overlapping generation model because in the real world individuals have different stages of their life-cycles interaction. When they are young, they interact with adult and old generation. This feature is captured in the overlapping generation model in which individuals live for three periods so that at any point in time, the economy composed of three cohorts, or generations: the young, adult and old.

The model is widely used because it makes it possible to study the aggregate implications of life cycle saving by individuals. The capital stock is generated by

individuals who save during their working lives to finance their consumption during retirement. The determinants of the aggregate capital stock as well as the effects of government policy on the capital stock and the welfare of different generations are easily studied.

One important aspect of the OLG model is that the steady state equilibrium need not be efficient (Blanchard and Fisher, 1993). The model provides an example of an economy in which the competitive equilibrium is not necessary that which would be chosen by a central planner. There is an even stronger result: the competitive equilibrium may not be Pareto optimal. Life-cycle savers may over accumulate capital, leading to equilibria in which everyone can be made better off by consuming part of the capital stock.

Another attribute of OLG type models is that it is possible that 'over saving' can occur when capital accumulation is added to the model – a situation which could be improved upon by a social planner by forcing households to draw down their capital stocks (Diamond, 1965). However, certain restrictions on the underlying technology of production and consumer tastes can ensure that the steady state level of saving corresponds to the Golden Rule savings rate of the Solow growth model and thus guarantee inter-temporal efficiency. Along the same lines, most empirical research on the subject has noted that over-saving does not seem to be a major problem in the real world.

A third fundamental contribution of OLG models is that they justify existence of money as a medium of exchange. A system of expectations exists as an equilibrium in which each new young generation accepts money from the previous old generation in exchange for consumption. They do this because they expect to be able to use that

money to purchase consumption when they are the old generation (Ljungqvist and Sargent, 2004).

4.3.The Model

Our main objective is to develop the theoretical model by modeling social capital as a result of an investment process or accumulation among individuals, which responds to the logic of maximizing individuals' expected utility. To reach this objective we develop a model in overlapping generation model to explain the interaction between agents and how it related to their decision either migrate or stay.

4.3.1. Assumptions

Consider an economy where 3 agents live. Each agent live for 3 periods where each her period is called as a young generation, adult generation, and old generation. As only one agent is born in each period, we consider and overlapping generations model with 3 agents and 3 periods.

4.3.2. Agents' Behavior

Every agent in the economy invest their time resource to either human capital formulation or social capital formation in order to maximize her (expected) utility. Her utility consists from sub-utility gained from social capital in a region where she lives, and that from goods consumption with wages while she works. We assume that she can work only in adult generation. We also assume that human capital investment has positive influence to her wage. Human capital accumulation is described as follows.

$$h_{t+1} = \delta h_t + I_{t+1}^h \quad (1)$$

where h_t is human capital at period t ($t = 0, \dots, \infty$), δ is the discount rate, and I_t^h

is human capital investment at period t . As all agents live for 3 generations, h_t can be rewritten as h_t ($t = Y, A, O$), where Y, A, O indicates each generation. She has chance to work either in home (H) or foreign (F) country, and she may get her salary either as $\omega^H(h_Y)$ or $\omega^F(h_Y)$. Wages in adult generation are based upon the investment to her human capital in young generation, and $\partial\omega^H(h_Y)/\partial h_Y > 0$ ($i = H, F$) is assumed. We also assume that each agent has initial endowment h_{YO} for her human capital. Her utility function can be written as follows.

$$U_t = u_1(c_t) + u_2(SC_t) \quad (t = Y, A, O) \quad (2)$$

Her utility function U_t consists from the sub-utility from consumption $u_1(c_t)$ and that from social capital $u_2(SC_t)$. c_t is the amount of consumption in t generation, and SC_t is the level of social capital in the region where she lives. Social capital in the region SC_t is formulated by the contribution of social capital investment from each agent. As the economy consists from 3 agents with each generation Y, A, O , we define the level of social capital at period t as follows.

$$SC_t = \{SC_Y * SC_A * SC_O\}^\alpha \quad (3)$$

$\alpha \geq 1$ shows the intensity of social tie in the region. As agents with three different generation are always in the region for each period, the subscription t will be removed from now and the level of social capital in the region is written as $SC \forall t$. SC_Y, SC_A, SC_O indicate contribution from an agent of each generation, respectively. Social capital is accumulated with investment by each agent. Investment by each agent will be accumulated for every period and its accumulation process is written as follows.

$$SC_{t+1} = \delta SC_t + I_{t+1}^S \quad (4)$$

I_t^S is social capital investment at period t . We also assume that each agent has social

endowment SC_{Y0} . In each period, every agent decides to allocate his time resource either for human capital investment or social capital investment. Assume that she has 1 endowment as time resource, and she decide to allocate time e_t for social capital investment, and $1 - e_t$ for human capital investment, where $0 \leq e_t \leq 1$, ($t = Y, A, O$). As a result, both human capital investment and social capital investment are function of e_t ; $I_t(e_t)$ and $SC_t(e_t)$.

Let us start to define agents' behavior in old generation. Agents in old generation do not have any chance to work. Her behavior is described as the following formulation.

$$\max_{e_o} U_o = u_1(c_o) + u_2(SC) \quad (5)$$

$$\text{subject to } Y_o = p * c_o \quad (6)$$

Y_o is her income in old generation and p is the price for the single good which is normalized as $p = 1$. She decides her time allocation about capital investment with her budget constraint. By solving this optimization problem, indirect utility function $V_o(e_o^*)$ is derived. As we do not allow any transfer to other agents after she dies, she do not have any incentive to invest in human capital in old generation, $e_o = 1$. Hereafter * indicates the optimized result.

In adult generation, she has a chance to migrate to work in foreign countries. She can work with higher wage when she works in foreign country. We define the wage as ω^k ($k = H, F$), where H is home country and F is foreign country. Without loss of generality, $\omega^H < \omega^F$. When she decides to work in the foreign country, her expected utility is expressed as follows.

$$EU_A^F = u_1(c_A) + u_2(SC^F) + \delta V_o \quad (7)$$

She maximize the utility above with the budget constraint $Y_A = c_A + s_A$, where

s_A shows saving for adult generation. Obviously she does not have any incentive to save her money for next generation because consumption in earlier generation brings about higher utility if the amount of consumption is the same; $s_A = 0$. As a result,

$$Y_A = \omega^F = c_A \quad (8)$$

By maximizing the expected utility function (7) with her budget constraint (8), the indirect utility EV_A^F can be calculated.

In the same manner, the utility maximization problem of agents who decides to stay in her home country is described as,

$$\max EU_A^H = u_1(c_A) + u_2(SC^H) + \delta V_O \quad (9)$$

$$\text{subject to } Y_A = \omega^H = c_A \quad (10)$$

Sub-utility from social capital in home country might be higher than that in the foreign country, because she had invested to social capital in her home country and social network in her home country is higher than that in the foreign country. To make the discussion simple, we assume that $SC^F = 0$ and remove the superscription H from SC^H . By solving the problem above, indirect utility EV_A^F is derived. As human capital investment in adult generation does not have any effect to her age, $e_A^* = 1$. As a result, her optimal decision is to migrate when $EV_A^F \geq EV_A^H$, and to stay in her home country when $EV_A^F < EV_A^H$.

In young generation, she has no income yet as it is not allowed to work in young generation, so $c_Y = 0$. The investment to her human capital has positive effect to her wage in adult generation, while the investment to social capital has positive effect to social capital in the region. She will decide her time allocation in young generation by considering the balance. Her behavior in adult generation is written as follows.

$$\max_{e_Y} EU_Y = u_2(SC) + \delta \max [EU_A^F, EU_A^H] \quad (11)$$

4.3.3. Equilibrium

Instantaneous utility both in young and old generation is common either for migrant workers who go to the foreign country in adult generation and those who stay their home country. As a result, she decide her time allocation in young generation e_Y and whether to migrate or not by comparing following expected utility.

$$\hat{E}U_A^F = u_1(\omega^F(e_Y)) \quad (12a)$$

$$\hat{E}U_A^H = u_1(\omega^H(e_Y)) + u_1(SC) \quad (12b)$$

In order to make the discussion simple, following assumptions are set.

$$I_t(e_t) = 1 - e_t \quad (13a)$$

$$SC_t(e_t) = e_t \quad (13b)$$

$$u_1(c) = c \quad (13c)$$

$$u_2(SC) = SC \quad (13d)$$

Let us define new functions as follows.

$$g(e_Y) = SC(e_Y) \quad (14a)$$

$$f(e_Y) = \omega^F(e_Y) - \omega^H(e_Y) \quad (14b)$$

$g(\cdot)$ is the monotonically increasing function from the definition of social capital function (3). $\omega^i(\cdot)$ ($i = F, H$) is monotonically decreasing function from the definition of wages function. In addition, we assume that $\partial f(e_Y)/\partial e_Y < 0$. This assumption shows that the marginal effect of human capital investment to the wage is higher for her wage in foreign country than that in home country. We can explain this relation more detail in the figure 4.1. The function of $g(e_Y)$ is monotonic increasing function, where is $\left. \frac{\partial SC}{\partial e_Y} \right|_{0-1} > 0$, or $\frac{\partial g(e_Y)}{\partial e_Y} > 0, (0 \leq e_Y \leq 1)$.

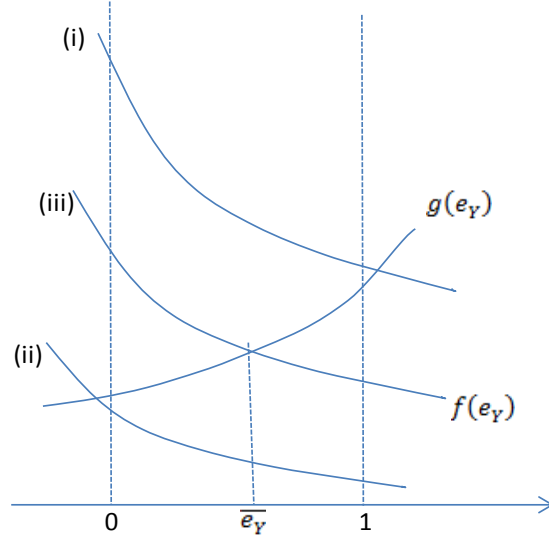


Figure 4.1. The relation between $f(e_Y)$ and $g(e_Y)$

Now we have a unique equilibrium for following 3 cases.

[Case 1] $f(0) < g(0)$

In this case, $g(\cdot)$ is always larger than $f(\cdot)$ for any $0 \leq e_Y \leq 1$. All agents stay their home country and $e_Y^* = 1$.

[Case 2] $f(1) > g(1)$

$f(\cdot)$ is always larger than $g(\cdot)$ for any $0 \leq e_Y \leq 1$. All agents migrate to the foreign country and $e_Y^* = 0$.

[Case 3] $f(0) \geq g(0)$ and $f(1) \leq g(1)$

There exist a threshold $\bar{e}_Y$ ($0 \leq \bar{e}_Y \leq 1$) which satisfies $\hat{E}U_A^F = \hat{E}U_A^H$ in this case. When $f(0) \geq g(1)$, all agents migrate and $e_Y^* = 0$. When $f(0) < g(1)$, all agents stay at home country and $e_Y^* = 1$.

4.4.Social Tie and Migration

Now let us consider the effect of social tie and migration decision. As we defined in eq. (3), $(\alpha \geq 1)$ indicate the level of social tie in the region. It is possible to have

different equilibrium for different α . Now start to check the existence of the threshold $\bar{\alpha}$ where staying in home country and going to abroad for migration is indifferent for agents. Firstly, it is easily shown that function (14a) is increasing function in α , and function (14b) is independent from α . In order to guarantee the existence of $\bar{\alpha}$, expected utility about migration $\hat{E}U_A^F$ should be smaller than that about staying in home country $\hat{E}U_A^F$ when $\alpha = 1$. This condition can be rewritten as $f(0) - g(0)|_{\alpha=1} \geq 0$. With simple calculation from equations 3, 14a and 14b, we could calculate $g(e_Y)$ and $f(e_Y)$.

$$\begin{aligned}
g(e_Y) &= SC(e_Y) = \{SC_Y * SC_A * SC_O\}^\alpha \\
&= (SC_{Y0} + e_Y)^\alpha * (SC_A + e_A)^\alpha * (SC_O + e_O)^\alpha \\
&= (SC_{Y0} + e_Y)^\alpha * (\delta SC_{Y0} + 1 + \delta e_Y)^\alpha * (\delta^2 SC_{Y0} + \delta + 1 + \delta^2 e_Y)^\alpha \\
&= [\delta^3 e_Y^3 + (3\delta^3 SC_{Y0} + \delta + 2\delta^2)e_Y^2 + \{(2\delta^3 + 3\delta^2 + 2\delta)SC_{Y0} + 1 + \delta\}e_Y \\
&\quad + \delta^2 SC_{Y0} + 1 + \delta]^\alpha
\end{aligned}$$

When $e_Y = 0$ and $\alpha = 1$, $g(e_Y) = \delta^2 SC_{Y0} + 1 + \delta$ and $f(e_Y) = \omega^F(0) - \omega^H(0)$, and we have the following condition.

$$\omega^F(0) - \omega^H(0) \geq \delta^2 SC_{Y0} + 1 + \delta \quad (15)$$

This condition indicates that when the wage difference is big enough, and/or the discount rate is small enough, there exist a threshold $\bar{\alpha}$. When social tie is not strong in the region, all are migrate to seek higher wage, and all agents stay at their home country when social tie is strong.

In summary, we have following propositions.

[Proposition 1]

There exist a unique threshold $\bar{\alpha}$ when conditions (refc) is satisfied.

[Proposition 2]

When social tie in the region is strong enough ($\alpha \geq \bar{\alpha}$), all agents in the region stay their home country. As a result, no migration equilibrium is observed. When social tie in the region is weak ($\alpha < \bar{\alpha}$), all agents in the region migrate to work in the foreign country.

From the propositions above, the second hypothesis ‘Communities and households with higher social capital will not send their family members as migrant workers’ is proved.

4.5.Implementation

These results are in line with our investigation in study area, which is the respondents not migrate because they have high level of social capital or social ties with their friend or families. In general, based upon the questions related to their feeling to their village and neighbor, respondents in Arjowilangun village think that their community and living environment are meaningful and precious for them. Based on the questions about their activity in the community, both respondents (migrant and non-migrant) answered that they want to participate in community activities. It can be concluded that for non migrant respondents; they want to participate to community participation more frequently, and it also indicates the higher level of social capital. Respondents with higher social capital have no intention to send migrants workers.

4.6.Summary and Conclusions

In this chapter we develop the methodological theory to measure social capital investment. We could show that investment of social capital among interactions of

three agents live in three periods in overlapping generation. Social capital is formed using a model of optimal individual investment decisions and the social capital accumulation process. Social capital is total stock of social capital from each agent in one time period with consider the discount rate, and from this relation we could calculate parameter to measure the social tie effect.

When social capital is monotonically increasing function, wages is monotonically decreasing function and $\partial f(e_Y)/\partial e_Y < 0$, we can assumption shows that the marginal effect of human capital investment to the wage is higher for her wage in foreign country than that in home country. And we have a unique equilibrium for following 3 cases: (i) case 1: $f(0) < g(0)$. In this case, $g(\cdot)$ is always larger than $f(\cdot)$ for any $0 \leq e_Y \leq 1$. All agents stay their home country and $e_Y^* = 1$. (ii) case 2: $f(1) < g(1)$. In this case, $f(\cdot)$ is always larger than $g(\cdot)$ for any $0 \leq e_Y \leq 1$. All agents migrate to the foreign country and $e_Y^* = 0$. And (iii) Case 3: $f(0) \geq g(0)$ and $f(1) \leq g(1)$. There exist a threshold $\bar{e}_Y$ ($0 \leq \bar{e}_Y \leq 1$) which satisfies $\hat{E}U_A^F = \hat{E}U_A^H$ in this case. When $f(0) \geq g(1)$, all agents migrate and $e_Y^* = 0$. When $f(0) < g(1)$, all agents stay at home country and $e_Y^* = 1$.

As summary of this chapter, we have following propositions. Proposition 1: There exist a unique threshold $\bar{\alpha}$ when conditions: (i) social capital function is increasing function in α ; (ii) wage function is decreasing function and independent from α ; and (iii) $f(0) - g(0)|_{\alpha=1} \geq 0$, are satisfied; and Proposition 2: When social tie in the region is strong enough ($\alpha \geq \bar{\alpha}$), all agents in the region stay their home country. As a result, no migration equilibrium is observed. When social tie in the region is weak ($\alpha < \bar{\alpha}$), all agents in the region migrate to work in the foreign country.

From the propositions above, the second hypothesis ‘communities and households with higher social capital will not send their family members as migrant workers.’ In the next chapter, we will prove the result of this chapter based on the empirical data from Indonesian rural area. In chapter 5, we will employ data only from migrant respondents and in chapter 6 we use all data (both, migrant and non-migrant).

Bibliography

- Agénor P.R., and Dinh H.T., 2013. Social Capital, Product Imitation and Growth with Learning Externalities. The World Bank
- Antoci, A., Sabatini, F. and Sodini, M. (2009) “The Fragility of Social Capital,” Department of Economics, University of Siena, Italy.
- Antoci, A., Sacco, P. L. and Vanin, P. (2007) “Social Capital Accumulation and the Evolution of Social Participation,” *Journal of Socio-Economics* 36: 128-43.
- Bartolini, S. and Bonatti, L. (2008) Endogenous Growth, Decline in Social Capital and Expansion of Market Activities, *Journal of Economic Behaviour and Organization* 3-4(67): 917-926.
- Blanchard O.J., and Fisher S., 1993. *Lectures on Macroeconomic*. The MIT Press Cambridge, Massachusetts.
- Beugelsdijk, S. and Smulders, S. (2009) Bonding and Bridging Social Capital and Economic Growth, CentER Discussion Paper 2009 - 27, Tilburg University, Department of Economics, February.
- Bisin, B. and Guaitoli, D. (2006) “Social Capital, Modernization and Growth,” ASSET Conference, mimeo.
- Fang, H. and Loury, G. C. (2004) Toward an Economic Theory of Dysfunctional Identity, Cowles Foundation Discussion Papers 1483, Cowles Foundation, Yale University.
- Fang, H. and Loury, G. C. (2005) Dysfunctional Identities Can Be Rational, *American Economic Review* 95: 104-111.
- Fukuyama, F. (1995) *Trust: The Social Virtues and the Creation of Prosperity*, New York: Free Press.
- Glaeser E.L., Redlick C., 2009. Social Capital and Urban Growth. *International Regional Science Review*. Volume 32 Number 3. July 2009. Pp 264-299

- Glaeser E.L., David Laibson and Bruce Sacerdote., 2002. AN ECONOMIC APPROACH TO SOCIAL CAPITAL. *The Economic Journal*, 112 (November), F437–F458. Royal Economic Society 2002. Published by Blackwell Publishers, 108 Cowley Road, Oxford OX4 1JF, UK and 350 Main Street, Malden, MA 02148, USA.
- Growiec, K., and Growiec, J. 2012.“Social Capital, Trust, and Multiple Equilibria in Economic Performance,” Online at <http://mpa.ub.uni-muenchen.de/39976/MPPA> Paper No. 39976, posted 10. July 2012 14:02 UTC.
- Knack, S. and Keefer, P. (1997) ”Does Social Capital Have an Economic Payoff? A Cross-Country Investigation,” *Quarterly Journal of Economics* 112: 1251-1288.
- Ljungqvist L., and Sargent T. J., 2000. *Recursive Macroeconomic Theory*, Second edition. Massachusetts Institute of Technology (MIT) Press
- Narayan, D. and Pritchett, L. (1999) Cents and Sociability: Household Income and Social Capital in Rural Tanzania, *Economic Development and Cultural Change* 47: 871-897.
- Putnam, R. D., (1995), *Bowling Alone: America’s Declining Social Capital*. *Journal of Democracy*. 6(1), 65-78.
- Putnam, R.D., 2000. *Bowling Alone: The Collapse and Revival of American Community*, New York: Simon and Schuster.
- Robison, L. J. and Siles, M. E. (1999) Social Capital and Household Income Distributions in the United States: 1980-1990, *Journal of Socio-Economics* 28: 43-93.
- Rupasinga, A. Stephan J. Goetz, and David Freshwater (2000) “Social Capital and Economic Growth: A County-level Analysis,” *Journal of Agricultural and Applied Economics* 3(32): 565-572.
- Tiago Neves Sequeira & Alexandra Ferreira-Lopes (2011) An Endogenous Growth Model with Human and Social Capital Interactions, *Review of Social Economy*, 69:4, 465-493, DOI: 10.1080/00346764.2011.592330
- Temple, J. and Johnson, P.A. (1998) Social Capability and Economic Growth, *The Quarterly Journal of Economics* 3(113): 965-990
- Youyou Baende Bofota, Raouf Boucekkine, Alain Pholo Bala. Social Capital as an Engine of Growth: Multisectoral Modelling and Implications. 2012. <halshs-00790855>
- Whiteley, P. (2000) Economic Growth and Social Capital, *Political Studies* 3(48): 443-466.
- World Bank (2006) “Where is the Wealth of Nations? Measuring Capital for the 21st Century,” Washington DC: The World Bank.

Chapter 5

SOCIAL CAPITAL AND MIGRATION BASED ON DURATION OF CONTRACT

5.1.Introduction

Underemployment and surplus of low-skilled labor are two major characteristics of a rural area in Indonesia. Therefore, rural households use migration strategies and allocate labor resources for increasing their income and to reducing the risks. Migration is commonly used by rural inhabitants to ensure survival, pursue economic activity, and support household living. Migration has always been positively viewed in terms of the visible monetary gains generated for the origin country. However, in assessing the benefits of migration, the issue of the invisible, non-monetary social cost remain largely unrecognized as part of the inevitable “cost” migrants have to pay in exchange for the prospect of a better life for their families. One of the impacts of migration is on the reduction in the number of labor available in the village (Prayitno et al, 2013).

Migration happens due to many factors. Aside of economic considerations, research over the past two decades shows the centrality of social networks to the process of migration. As social beings, humans are inevitably enmeshed in

interpersonal webs of strong ties to close friends and relatives and weak ties to more distant relatives, casual acquaintances, and friends of friends. By drawing on the social ties, an individual can mobilize the social capital embedded within it to gain valuable information, moral support, and material assistance that may reduce, often quite substantially, the costs and risks of migration. As a result, people with migrant friends and relatives display a much higher likelihood of emigration compared to those who do not have any; stronger the social connection, more and better the person's migratory experience, the higher are the odds of eventual out-migration (Massey and Aysa, 2011).

People gain access to social capital through membership in interpersonal networks and social ties, then convert them into other forms of capital to improve or maintain their position in society (Bourdieu, 1986 and Coleman, 1988). Portes and Sensenbrenner (1993) point out that social capital may have negative as well as positive consequences; theorists generally emphasize the positive role it plays in the acquisition and accumulation of other forms of capital, an emphasis that has been particularly strong in migration research.

Our aim in this chapter is to investigate the relation between social capital and migration in rural areas based from migrant respondents data. We develop our first hypothesis as: communities and households with higher social capital tend to send their family members as migrant workers. This is in line with some research on social capital and migration where it is found that social ties among community members and trusts exacerbate migration. Our earlier finding (Prayitno et al, 2013) indicates that households with higher social capital tend to send migrant workers abroad. Migrants maintain strong ties with their families and return periodically to their home

areas (Lu, 2010). Excepting for a strong relationship to the family, the prospective migrants have a strong relationship with prior migrants. So, migration is often slow at the beginning, but increases rapidly once it has begun (Dijk, 1997). Palloni (2001) explains about the relation of migration and family network where the family with higher level of social capital (network ties) among siblings tends to send the members of family as migrant workers.

The second hypothesis is that communities and households with higher social capital will not send their family members as migrant workers. Research on this topic is rare; one of the studies that relates to migration and social capital is of Morrison. Morrison on Land (1969) found that the probability of an individual migrating diminishes as his “duration status” or “cumulated length” increases. In line with our research Jeong (2012) found that age (duration of stay) in the community over the years affected the involvement and strong sense of solidarity with the environment and neighbors. We want to proof, between hypothesis one and two, which is suitable for this research.

5.2.Basic Idea

Bourdieu (1986), who first analyzed social capital systematically, defined it as “the aggregate of the actual or potential resources which are linked to the possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition.” Coleman (1988) later described social capital as a resource for action “embodied in relations among persons,” which emerges from closure in the social structure and is convertible to other forms of capital. Social capital such as trust, norms, and networks improves the efficiency of society by

facilitating coordination action (Bourdieu, 1986 and Coleman, 1988). Social capital improves participants' monitoring, reduces free-riders, thus mutual bonds of trust. Communities with high levels of social capital are more effective at exercising social control over deviant and uncivil behaviors (Garip, 2012 and Mc Millan et al, 1986).

Several studies identify the relationship between migration and theory of social capital. Migrant networks (one component of social capital) are sets of interpersonal ties that connect migrants, former migrants, and non migrants to one another through relations of kinship, friendship, and shared community origin. Palloni et al. (2001) show the relation of international migration and social capital using information of family networks. They found that families that have an older sibling migrating triple the likelihood of migration. The diffuse social capital distributed among community and household members strongly influences the likelihood of out-migration. Garip (2012) says that migrant social capital (resource of information or assistance) generates migration from rural areas in Thailand. In line with Massey and Aysa (2011), Garip found that stronger the social connection and the more and better the person's migratory experience, the higher are the odds of eventual out-migration.

The above literature shows the relation between social capital and migration as norms, networks, and mutual trust of "civil society". But the relation between social capitals as sense of community has not been much explored. Firstly, in this study, we use the concepts thoroughly studied by community psychologists as a part of social capital such as sense of community, collective efficacy/empowerment, citizen participation, and neighboring base on the research of Perkins and Long (2002). In this study, we use the definition of sense of community proposed by McMillan, "a feeling that members have of belonging and being important to each other, and a

shared faith that members' needs will be met by the commitment to be together" (Mc Millan et al, 1986). Secondly, there are many cases from developed countries, Africa and Latin America and are rare from South-East Asia. This explains our motivation to study the relation of social capital and migration in the case of a less-developed country.

Informal	Cognition/Trust	Social Behaviour
Informal	Sense of community	Neighboring
Formally Organized	Collective efficacy/ Empowerment	Participation

Source: Perkins and Long (2002)

Figure 5.1. Four dimensions of social capital.

The link between participation and sense of community has been found at both the individual and community level of analysis (Perkin et al, 1996). It makes sense that a group of residents must have at least some sense of community to be interested in organizing and working together to solve common problems. Sense of community consists of social connections, mutual concern and community values. Besides four components of sense of community, *place attachment* or *sense of place* is an important construct in its relationship to sense of community and social capital, but one that is often overlooked by community psychologists. It refers to emotional bonding, developed over time from behavioral, affective, and cognitive ties to a particular socio-physical environment (Brown and Perkin, 1992). These bonds are integral to individual and community aspects of self-identity and provide a source of stability and change for individuals and communities alike. The higher the feeling of place the higher will be the increase in the sense of community and the more they want to interact among themselves (neighboring). In general, residents who socially

interact with their neighbors are more likely to be aware of local voluntary organizations and become members (Chavis and Wandersman, 1990). In this study, we measure the level of social capital using the concept of sense of community. We assume that a sense of place will have an impact on the sense of community and will have some relation to neighboring or empowerment and participation in community activities. Related to our hypotheses we assume some relation between this construct of social capital and migration.

5.3.Description of an Empirical Case

In chapter 4, we develop a theoretical model how individual investing in social capital or human capital and its relation with an individual's decision (migrate or not). We develop this model base on the theory of overlapping generation. We assume that on the one-time dimension there are three agents (young, adult and old), their interaction and activities have influence for the decision to invest in social capital and migrate. To prove this model in empirical research we employ structural equation model for the construct of social capital in this chapter.

5.3.1. Determination of the Sample

To illustrate the model in an applied setting, we used data from the field survey which was conducted in November 2012. Through systematic sampling, 250 migrant households living at Arjowilangun village, Kalipare district, Malang regency, East Java Province Indonesia, are selected as the respondents for the study. Five hamlets are selected covering Pangganglele, Lodalem, Lotekol, Duren and Barisan.

We classified the types of households as migrant households and non-migrant households. We defined migrant households as a family with one or more of the members worked as migrant and for non migrant household are households without migrant workers. In this chapter, we examine the concept of social capital as sense of community and make analysis variance covariance with structural equation modeling to check the relation it with the decision to of the contract duration and activities within communities.

Since we raise a hypothesis that communities and households with higher social capital tend to send their family members as migrant workers, then through investigation with questionnaire survey, we define sample of respondent as follows:

1. The respondents are migrant households with active or former migrant workers,
2. For former respondent, they are already coming back and no longer have an intention to work as a migrant worker anymore.

Thus sample of respondent is the inhabitants in the Arjowilangun village, and we take sample from 5 hamlets base on the number of migrant worker's proportion in each hamlet.

5.3.2. Descriptive Statistic

In this section, we attempt to measure social capital represented by sense of community, neighboring and sense of place and it relation with community activities. First, we measure this relation with a set of questions, there are 12 questions to describe respondent's opinion about their values and belief about their environment using 5 scales where 5 means very much (extremely yes) until 1 means least meaning (extremely no). Second, we have measured the activities of the respondents in the community by using their response to the question "did you participate or not in the

community activity?” and the answers could be “yes” or “no”. If the respondents answered “no” it means that they did not participate in the community activity, and if “yes” it means they have participated. We employed descriptive statistic in SPSS to calculate the relation.

Primary data throughout this chapter, employing this question in the questionnaires surveys and makes same calculation to measure the relationship between the demographic attributes with the answers of questionnaire questions by respondents. Migrant respondents were asked demographic attributes about their income, sex, age, education, type of migration and duration of work.

In the chapter 3, we explained the characteristic of household respondents both migrant and non migrant. In this section, we only employ migrant household respondents to explain the relationship between each demographic attribute with values and belief to the village – neighbors, and community activities.

In the household questionnaire survey, we investigated 7 demographic attributes for each household consist of household income, education, age, gender, family members, occupation, and duration of work. Table 5.1 depicts the best result of cross tabulation test for the relation of demographic attributes and 12 questions about values and belief to village and neighbors. The result is, for the sample size of 250 respondents only type of migration and income has strong relation with almost answer of the questions (the value of chi-square test lest than *p values* < 0.05). It means that type of migration and income could influence the decision of respondents to answer the questions. Another attributes such as family members and occupation has significant value only with activities Y4, Y5, Y6, Y11, and Y2, Y3, Y12 respectively.

Table 5.1. Chi square test (Pearson value) between demographic attributes and 12 questions related to values and belief to village and neighbors

Attributes	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12
Education	0.407	0.712	0.419	0.708	0.102	0.944	0.845	0.577	0.95	0.451	0.998	0.899
Income	0.047	0.003	0.033	0.024	0.337	0.365	0.217	0.125	0.348	0.204	0.027	0.18
Type of Migration	0.017	0.151	0.012	0.026	0.029	0.015	0.011	0.023	0.086	0.277	0.277	0.283
Family members	0.095	0.255	0.456	0.001	0.035	0.042	0.538	0.132	0.299	0.452	0.02	0.069
Occupation	0.337	0.01	0.01	0.706	0.836	0.693	0.972	0.084	0.398	0.212	0.319	0.02
Gender	0.139	0.417	0.44	0.506	0.45	0.124	0.405	0.073	0.136	0.392	0.5	0.071

Figure 5.2. shows the relation between education and important to consult people who are in trouble or Y5 (the value of Pearson chi square 0,102, closest value to $p < 0.05$). In this figure we can see that for elementary school or lower and junior high school the higher answer is no comment, and in the high school and higher level the answer of yes and extremely yes is the higher. We can conclude that there are some relation between education level and the respondent answer to the question.

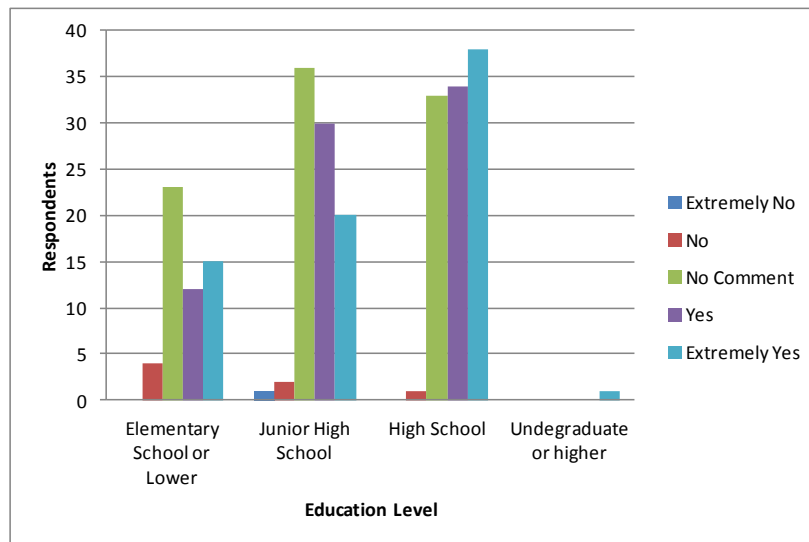


Figure 5.2. The relationship between education and Y5

Figure 5.3. below depicts the relation between income and respondent feeling about their neighbors (question no 11 or Y11, Neighbors will help me and my family

when we have some economic trouble). The value of Pearson chi square is 0,027 less than the p value ($p < 0.05$), it mean that the income has relation with the feeling of their neighbors. Even though the most answer is ‘no comment’, from the result of chi square test shown the significant value. So, we can conclude that the income has relation with their answer about their neighbor who will help them when they face some difficulties. It is common in rural area that their will help each others.

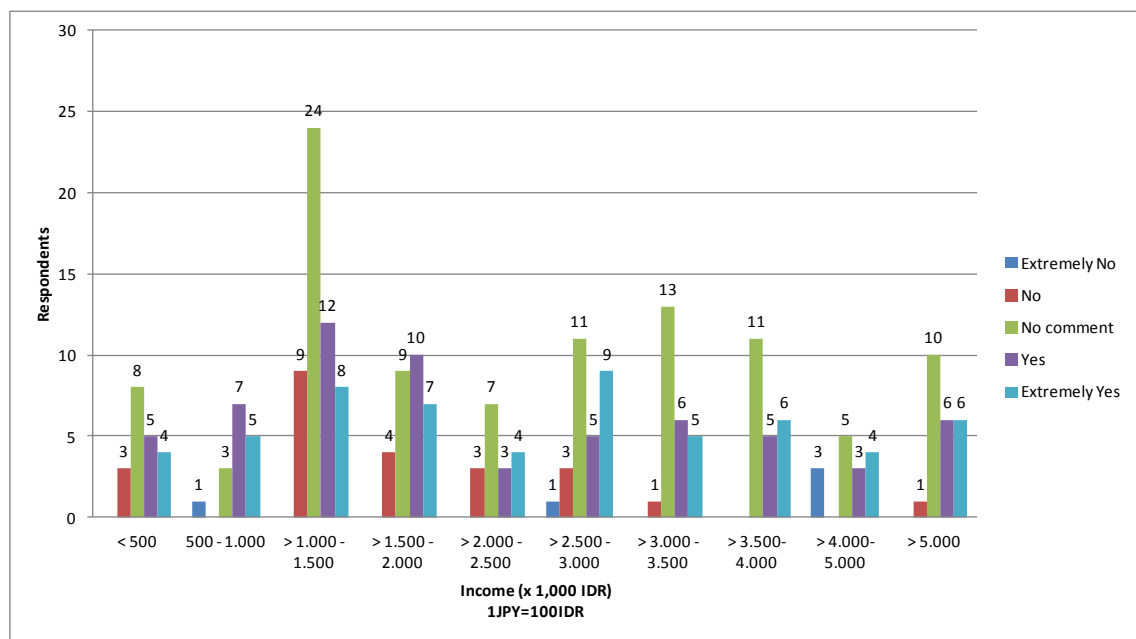


Figure 5.3. The relation between income and Y11

The next, Figure 5.4. shows the relationship between type of migration and place attachment (Y1) to their village. The value of Pearson chi square in the cross tabulation analysis is 0,017 less than the p value ($p < 0.05$), it mean that the type of migration has relation with place attachment to their village. International migrant workers has more ties to their village than local migrant, majority of respondent answer yes and extremely yes more that no and no comment.

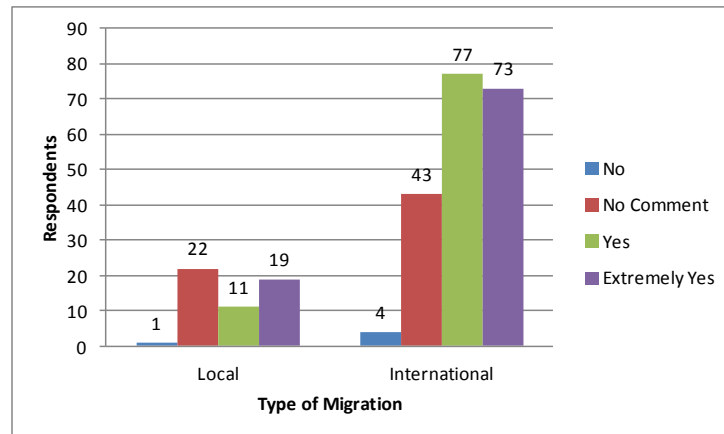


Figure 5.4. The relation between type of migration and Y1

The relation between demographic attributes and activities in the community are shown by the calculation of cross tabulation (Table 5.2.). We ask the respondents about their activities in the community, and divided as: the activities no 1 (ACT1) is village, hamlet or RT/RW meeting; ACT 2, village cooperative meeting; ACT3, religious activities (praying in mosque, muludan, Ramadhan, sedekah and etc.); ACT4, cultural festival; ACT 5, working together to clean street, pavement local road and etc.; ACT6, sport even at independent day (17 August each year); and ACT7, social gathering (Kenduri, Arisan).

The result of the calculation using cross tabulation data (Table 5.2.), the chi-square test shown the value of Pearson's Asymp.Sig (2-sided) less than 0,05 are in type of migration with ACT4, and ACT5, family members with ACT 3 and ACT 4, and gender with ACT 6 and ACT7. For demographic attribute: income, education and family members have no significant values and from this result, we may conclude that relation between demographic attributes and activities of the respondents in community activities are not significant or independent.

Table 5.2. Chi square test (value Pearson chi square) between Attributes Data and Activities in the community (activities 1-7)

Attributes	ACT1	ACT2	ACT3	ACT4	ACT5	ACT6	ACT7
Type of Migrant	0.131	0.131	0.959	0.006	0.048	0.508	0.008
Income	0.284	0.333	0.567	0.449	0.301	0.241	0.847
Education	0.038	0.84	0.414	0.323	0.649	0.188	0.428
Family members	0.493	0.293	0.079	0.094	0.316	0.449	0.926
Occupation	0.177	0.169	0.298	0.63	0.457	0.376	0.678
Gender	0.364	0.278	0.367	0.277	0.025	0.012	0.01

5.3.3. Explanatory Variables

The respondents of this study are households that have one or more migrant workers. The questions were designed into two types, for household and migrant worker. Households were asked questions about income, and years lived in the village. Migrant respondents were asked about their income (before and after migrate), sex, age, education, type of migration and duration of work.

In the questionnaire survey, the respondents were asked to reveal their household monthly income, divided into ten categories. The minimum wage in Malang Regency (UMR), as decided by the government in 2013, is IDR 1,343,700 or JPY 13,437.

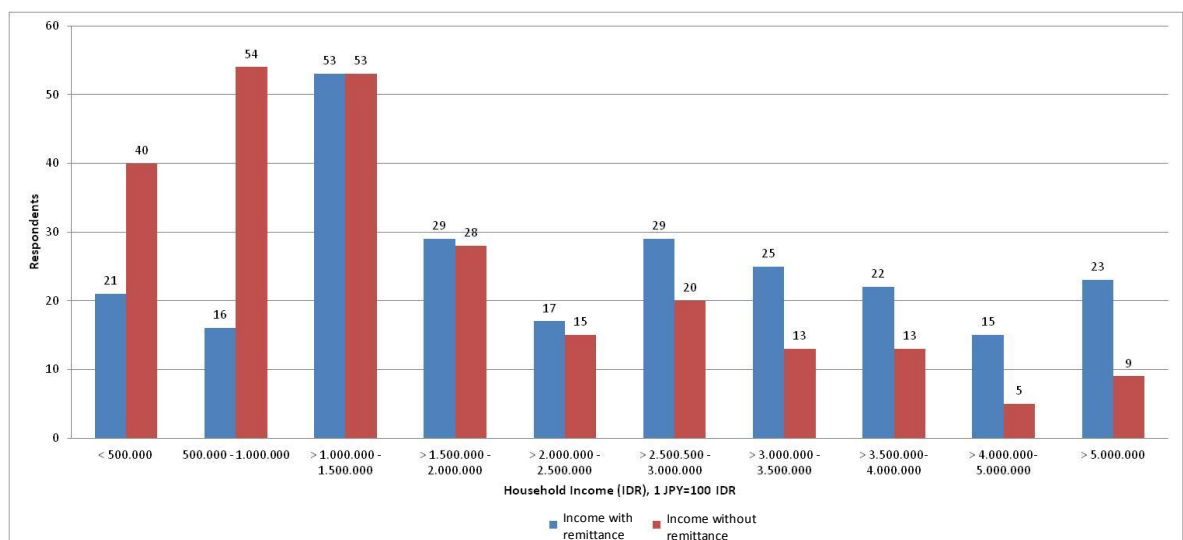


Figure 5.5. Household income plus remittance

Figure 5.5, explains the income of respondents with and without remittance from migrant workers. The red indicator shows the household income with and the blue without remittance. The income of household respondents with remittance is higher than without remittance. Only 34 respondents or of 15% from the total respondent, the income below the regional minimum wages or UMR (upah minimum regional), and 53 respondents or 21% is in the range of it, and the rest 160 respondents or 64% had income above the UMR. There is 94 respondents or 38% below UMR of Malang regency if the income without remittance.

There are more female respondents (142 or 56.8%) than male respondents (108 or 43.26%) (Figure 5.6). In migration, among the female, 127 were international workers, 15 local workers, and among the male, 69 and 39 were international and local workers, respectively. Here, we propose a dummy variable to type of migrant, international migrant as 1 and 0 otherwise. The critical values of type of migrant level of respondent show χ^2 (df = 1, N = 250) = 82.944 at $p < 0.000$.

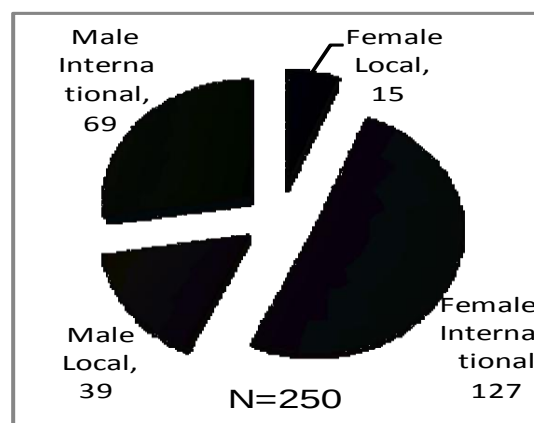


Figure 5.6. Gender and type of migration

The four groups of education levels of the representative households are: (i) elementary school, (ii) junior school, (iii) high school, and (iv) university level. The elementary school has six years of education, whereas junior and high schools have

three years. According to data, the average schooling of adults in Indonesia is 5 years. The largest number of respondents had high-school-level education (110 respondents or 44%) (Figure 5.7). Those with junior high-school-level education had 90 respondents or constituted 36% of population; those with elementary school education or even lower constituted 19.6% or 18.6%, and at the level of university just one respondent (0.4%). This study suggests that respondents in the study area have higher level of education than the national average. In other words, it means that the education level in the village is more than the average years of schooling in Indonesia. We propose a dummy variable for respondents with a level of education lower or equal to elementary school as 0 and 1 otherwise. The critical value of education level of respondent shows χ^2 (df = 1, N = 250) = 92,416 at $p < 0.000$.

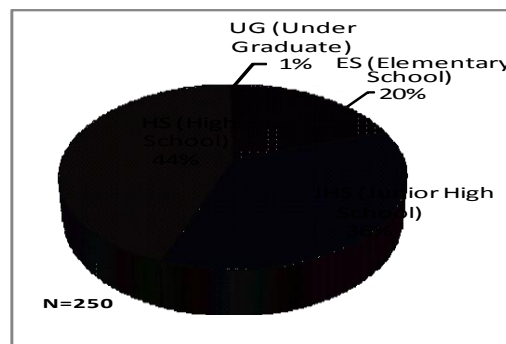


Figure 5.7. Education background of respondents

In duration of work (Figure 5.8.), 102 respondents or 40.8% of migrant workers worked for more than four years. It means that these respondents have renewed their contract after the completion of the first contract (two-year contract). In general, the international migrant workers have two-year contracts and are renewed again. The next category is two four-year contracts constituting 45 respondents (18%); it means that after completing a two-year contract they return back to their village, the next is

for a duration of contract more than or equal to three years and less than four years (44 respondents or 17.6%). The smallest is the contract duration of less than one year (24 respondents or 9.6%). We propose a dummy variable for respondent with a duration of more than or equal to 4 years as 1, and 0 otherwise. The critical values of the level of contract show χ^2 ($df = 1$, $N = 250$) = 8.464 at $p = 0.004$). From this value we can conclude that the length of contract has significant relation with social capital formation.

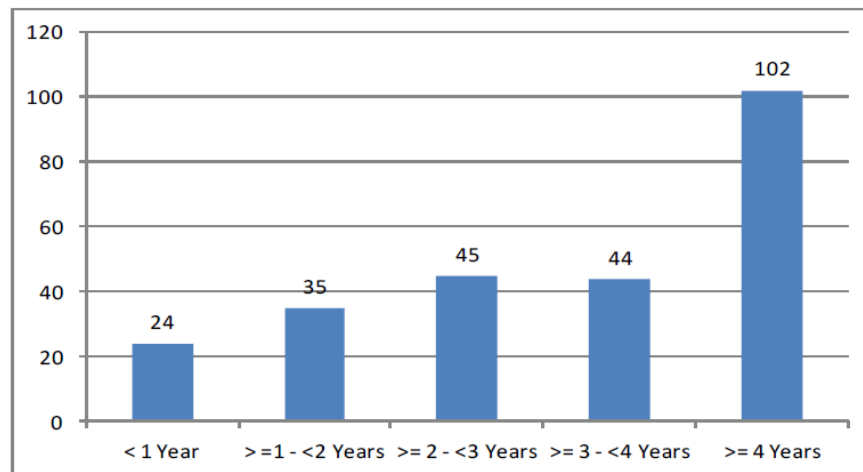


Figure. 5.8. The duration of contract

In this chapter, we measure social capital by using the duration of work (contract) of respondents. The level of social capital will represent by the significance values from latent variables with the duration of works. Higher level of social capital will show by the value between social capital formation and the duration of works.

5.4.Measuring Social Capital

There are a number of dimensions to social capital and to measure its level. Standardization in measuring social capital is still far away (Lin 2001). There has been an abundance of ad-hoc measures, often derived from data not specifically

designed to measure it but that happened to be available readily for analysis. This has made a thorough and specific testing of social capital theory difficult for structural comparison.

Latent variables were used to define the concept social capital. We have designed some questions in the questionnaire survey to measure the use from four components of the concept of psychological sense of community. They are: (1) sense of community; (2) empowerment; (3) neighboring behavior; and (4) participation in community activities. We add the concept of sense of place in the question survey that we already delivered.

We sought response on sense of place, sense of community, neighboring and collective efficacy or empowerment about values and beliefs toward their village and neighbor of respondents (12 questions) and participation in community activities using 13 questions.

In sub chapter 5.3, we investigate the relation among observed variables without analysis how the relation with un-observed or latent variables. In this study, we proposed more than one latent variable (i.e., sense of community, sense of place, neighboring and empowerment) that explains the concept of social capital. We were applying a structural equation model (SEM) to know the causal relationship between observed variables and latent variables. By using structural equation modeling, we tried to explore a number of plausible causal paths between the social capital concept in latent variable's indicator and observed variables. In simple language, we want to know which social capital indicators have a causal influence on other factors and to the migration decision (in here shown by the duration of contract).

5.4.1. Principal Component Analysis

To construct uncorrelated factors of social capital from the result of questionnaire survey, a principal component analysis with varimax rotation was performed. PCA is a method of data reduction wherein the process it groups correlated variables into uncorrelated variable factors (Fabrigar et al. 1999).

We use PCA in four-factor restriction for the 12 questions related to respondent's opinion about social capital base on their living environment (Table 5.4.). Factor 1 is related to variables Y6, Y7, Y8 and Y9, Factor 2 to Y1, Y2 and Y12, Factor 3 to variables Y10 and Y11 and Factor 4 consists of variables Y3, Y4 and Y5. The first factor accounts for 62.4% of variance. Variables loaded on this factor mostly refer to "sense of community". The second factor accounts for 10% of variance and describes relation to place, being a symbol of "sense of place". The third factor accounting for 6.2% of variance refers to "neighboring", and the last, the fourth factor, accounts for 4.1% of variance as "collective efficacy/empowerment". We only use three factors and neglected factor 4 (empowerment).

Table 5.4. Rotated Factors Loadings

Variables	Factors Loading			
	Factor 1	Factor 2	Factor 3	Factor 4
Y1. Place attachment to your village as your hometown	0.325	0.806	0.175	0.252
Y2. Nature and landscape of your village are nice	0.374	0.757	0.187	0.205
Y3. Foodstuff of your village is nice	0.334	0.419	0.117	0.671
Y4. Important to involve in community events activities	0.566	0.392	0.084	0.573
Y5. Important to consult people who are in trouble	0.356	0.220	0.388	0.696
Y6. Important to keep daily communication with neighbours	0.767	0.301	0.252	0.339
Y7. Important to respect ancestors and manage community grave	0.789	0.327	0.245	0.288
Y8. Important to communicate with relatives living in the village	0.775	0.371	0.249	0.231

Y9. Neighbours are very important for me	0.806	0.305	0.209	0.223
Y10. Neighbours will take care of my children and my parent when I am going abroad	0.199	0.189	0.876	0.056
Y11. Neighbours will help me and my family when we have some economic trouble	0.223	0.100	0.852	0.245
Y12. Want to continue living in this village	0.269	0.824	0.116	0.225
Eigen value	7.490	1.202	0.745	0.498
Contribution ratio (%)	62.4	10.0	6.212	4.150
Cumulative contribution ratio (%)	62.41	72.43	78.64	82.79

5.4.2. The Model

Based on the results from the survey and discussion in Chapter 3, we have observed variables as demographic attributes, characteristic of migrant, values and belief towards village and community participation and identified latent variables in this study as sense of place, sense of community, neighboring behavior, and empowerment.

This study proposes more than one latent variable (i.e., sense of community, sense of place, neighboring and empowerment) that explains the causal relationship among observed variables based on structural equation and applying structural equation model (SEM). The level of social capital interprets from the relationship between sense of place, sense of community and neighboring. We have used the observed variable duration of works to measure the relationship between social capital and migration.

5.4.3. Estimation of Model

This study configures the path, relationship between latent variables and observed variables based on principal component analysis. First, before conducting principal

component analysis on values of sense of community (Y), we have performed proximity interpretation of each variable. For interpretation, it may be possible to classify Y into three groups as follows: Y1, Y2 and Y12 focus on “sense of place”, Y6, Y7, Y8, Y9 as “sense of community” and Y10, Y11 focus on “neighboring”.

Second, we classified community activities focusing only for the response of “yes” constituted more than 50 per cent. The following labeling was used: ACT (Activities) 1 as cultural festival, ACT 2 as social gathering, ACT 3 as religious activities, ACT 4 as helping elderly people, ACT 5 as working together, ACT 6 as sport event and ACT 7 as village or hamlet meeting.

Next, we conduct an SEM analysis on the correlation between independent variables and to understand the indirect effects. SEM is multivariate regression in which the response variable in the regression equation may become predictor in another equation. These allow us to account for correlation and distinguish direct and indirect effects of our exogenous and latent variables on sense of community. For estimation we use the general least square (GLS) method. In general, this method is preferable to Maximum Likelihood (ML) estimation when the data is severely normally distributed and includes ordinal data (Schumacker and Lomax, 2010).

Based on the results of principal component analysis, we assumed three latent variables (naming F1, F2 and F3). We develop a model to correspond between the latent variables and observed variables. Here assumed three latent variables as identity involved in "sense of community", “sense of place” and “neighboring” respectively.

Table 5.5. shows the result of structural equation modeling between latent variable (i.e., sense of place, sense of community and neighboring) and observed variables

(Y's variables). In order to design a path, we adopt the model having goodness of fit higher than 2.

Table 5.5. Structural equation modeling

	Model 1	Model 2	Model 3
Y1,Y2,	F2	F2	F2
Y6, Y7, Y8, Y9	F1	F1	F1
Y10	F3	F3	F3
Y11	F3	F3	F3
Y12	F2	F2	F2
Model Chisquare	273.558	247,533	266.718
Df	178	159	176
Goodness-of-fit index	0.895	0.901	0.898
Adjusted goodness-of-fit index	0.864	0.869	0.866
RMSEA index	0.046	0.047	0.045
NFI delta 1	0.509	0.537	0.517
PNFI	0.432	0.449	0.433
CFI	0.725	0.743	0.735
RMR	0.82	0.92	0.105
BIC	566.195	529.127	570.398

For the individual and regional attributes and community activities variables, we designed a path based on the goodness of fit of each model. We finally selected variables and model structure with the highest estimation accuracy.

We use the factors constructed by the above PCA analysis as a basis for determining exogenous latent variables for SEM analysis. Figure 5.9. provides the best model fit. The model fit can be considered “good” in terms of goodness of fit (CMIN/DF = 1.557, GFI = 0.901, AGFI = 0.869 and RMSE 0.047).

Figure 5 shows the model structure which we finally obtained. Through this analysis, we find out the structure among latent variables that could be explained to

define the concept of social capital. There are significant paths to sense of place from type of migrant, significant paths to sense of community from education and significant paths to neighboring from the income of respondents. The duration of work is treated as observed, endogenous variable since we assume that it might be influenced by sense of place, sense of community or neighboring. From the results of analysis, we believe that only the duration of work has significant impact from sense of community. It means that the household with higher sense of community tend to affordable to send longer period of migration.

We find that education directly affects the sense of community with regression weight of 0.203 (Table 5.6), if the respondent has higher education, on average he has 20,3 % higher sense of community (for example, more communication with neighbors). From the latent variable, a sense of place significantly influences sense of community with positive regression value of 0.870. This is in line with the study of Perkins and Long (2002), Lin, (2001), Preeza et al. (2001) and Perkins et al. (1990), which has found the impact of sense of place on sense of community.

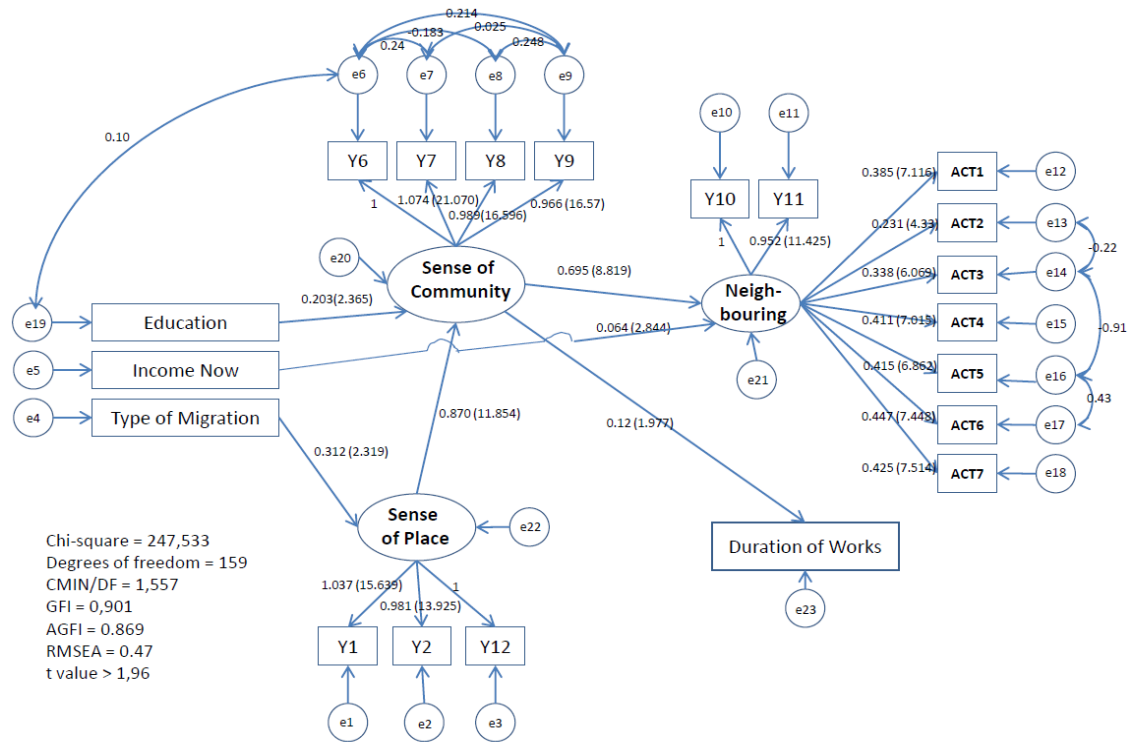


Figure 5.9 and Table 5.6 show that the respondents who have higher sense of community have significant impact on neighboring and have impact on the duration of work. The estimated value from sense of community to duration of work is 0.12. and the t value (C.R) is more 1,96. It means that if the sense of community is higher, then it will have a significant effect to be affordable to send a longer period of migration.

Table 5.6. SEM Model Estimation, in brackets standardized effects

Latent Constructs	Path		Estimate	C.R.	P
Sense of Place	<---	Type of Migration	0.312 (0.170)	2.319	0.02
Sense of Community	<---	Sense of place	0.870 (0.840)	11.854	***
Sense of Community	<---	Education	0.2023 (0.107)	2.365	0.018
Neighbouring	<---	Sense of community	0.695 (0.742)	8.819	***
Neighbouring	<---	Income now	0.064 (0.166)	2.884	0.004
Duration of Work	<---	Sense of community	0.12 (0.145)	1.977	0.048

In this chapter, we have proposed two hypotheses, (i) communities and households with higher social capital tend to send their family members as migrant workers; and

(ii) communities and households with higher social capital tend to send their family members as migrant workers.

By observing this result, we have confirmed our first hypothesis that communities and households with higher social capital tend to send their family members as migrant workers..

5.5.Summary and Conclusions

In this Chapter, we measure the relationship between social capital and migration in rural area development. We use the concept of sense of community, neighboring and sense of place to measure the relationship of social capital and migration. The aim of this study is to investigate the relationship between social capital and migration. The analysis is based on a survey of community activities in Arjowilangun village which is typical of migrant rural area in Indonesia. To find response to the question, does the level of social capital in the community have an impact on the number of migrating, Section 5.2 first describes the concept of social capital and analyses it based on previous studies on sense of place and sense of community. Here we find the possibility of forming social capital from the concept of sense of community which consists of sense of community, neighboring, empowerment and participation on community activities, plus sense of place concept. In Section 5.3, we present the characteristics of household income and migrant characteristics (type of migration and education). The household income, type of migration and education might have effect to latent variables that we have proposed. Section 5.4. explained the analysis of cross tabulation to measure the relation among demographic attributes, respondent opinion about their living environment

(village)-neighbors and on the community activities. We have explained the respondent participation on the community activities in section 5.5. Section 5.6 examines the component to measure social capital. Principal component analysis was used to define the variable for each factor of latent variables and present the covariance structure analysis to understand the relationship between latent variables and observe variables.

Our result shows that sense of community positively has a significant impact between neighboring and the duration of work. It means that higher social capital could endorse people to work longer. From this result, we have confirmed our first hypothesis that households with higher social capital are affordable to send a longer period their family members as migrant workers. However, the result is different with our theoretical model in chapter 4, our current model so far could explain the relation between social capital and migration.

This chapter has limitation to calculate the level of social capital only from the data of migrant household respondents. To make this study more comprehensive we should employ in complete data from migrant and non migrant respondents. In the next chapter (chapter 6), we employed by using both data (migrant and non-migrant) and make a relation with the decision migrate or stay. The model integrated in ICLV model integrated latent variable and decision choice, measured by Mplus program (Muthén and Muthén, 2012).

Bibliography

Bourdieu, P. 1986. "The Forms of Capital." Pp. 241–58 in *Handbook of Theory and Research for the Sociology of Education*, edited by John G. Richardson. New York: Greenwood Press.

- Brown, B. B., & Perkins, D. D. 1992. Disruptions in Place Attachment., Place attachment (Vol. 12). In I. Altman & S. Low (Eds.) New York: Plenum.. p. 279–304
- Chavis, D., M. and Wandersman A. 1990. Sense of Community in the Urban Environment: A Catalyst for Participation and Community Development. American Journal of Community Psychology, Vol. 18, No.1.
- Coleman, J., S. 1988. 'Norms as Social Capital', in Gerard Radnitzky and Peter Bernholz (eds), Economic Imperialism: The Economic Approach Applied Outside the Field of Economics, New York: Paragon House Publisher, 133-55.
- Dijk, F., V. 1997. Social Ties and Economic Performance. Kluwer Academic Publishing.
- Fabrigar, L.R., Wegener, D.T., MacCullum, R.C., and Strahan, E.J. Evaluating the use of exploratory factor analysis in psychological research. Psychological Method 4. 1999. p. 272-299.
- Garip, F. 2012. Discovering Diverse Mechanisms of Migration: The Mexico–U.S. Stream from 1970 to 2000, Department of Sociology, Harvard University.
- Israel, Glee D. Determining Sample Size. Program Evaluation and Organizational Development, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: November 1992.
- Jeong, H., Matsushima K., and Kobayashi K. 2012. Identity and Communication in Marginal Rural Area—Case Study of Nichinan Town in Japan, Journal of Society of Civil Engineers, Ser.D3, Vol. 68 No.5. p.I_499-I_511 (in English).
- Land, Kenneth C. Duration of Residence and Prospective Migration: Further Evidence. Demography. Vol. 6, Number 2. 1969.
- Lu, Yao. "Rural–urban Migration and Health: Evidence from Longitudinal Data in Indonesia." Social Science and Medicine 70(3). 2010. p. 412-419.
- Lin, N. Social Capital: a Theory of Social Structure and Action. Cambridge: Cambridge University Press. 2001.
- McMillan, D. W., & Chavis, D. M. 1986. Sense of community: A definition and theory. Journal of Community Psychology, 14. p. 6-23.
- Massey, D. S., and M. Aysa-Lastra. 2011. Social Capital and International Migration from Latin America. International Journal of Population Research, Volume 2011, Article ID 834145. Proceedings of the National Academy of Sciences :5328-35. 2011.
- Prayitno, G., Matsushima K., Kobayashi K., Jeong H. 2014. Social Capital and Migration in Rural Area (A Case of Malang Regency, Indonesia). Chapter 8. Book: Social Capital and Development Trends in Rural Areas. Vol 9. MARG (Marginal Area Research Group), Kyoto

- Prayitno, G., Nugraha, A.A., Sari N., Balqis Y.P.U. K., 2013. The Impact of International Migrant Workers on Rural Labour Availability (Case study Ganjaran Village, Malang Regency). *Procedia Environmental Sciences-Elsevier*, Volume 17, 2013. p. 992–998.
- Portes, A., and Sensenbrenner J., 1993. “Embeddedness and Immigration: Notes on the Social Determinants of Economic Action.” *American Journal of Sociology* 98:1320–51. 1993.
- Palloni, Alberto., Douglas S. Massey, Miguel Ceballos, Kristin Espinosa, and Michael Spittel. 2001. Social Capital and International Migration: A Test Using Information on Family Networks. *American Journal of Sociology*, Vol. 106, No. 5. March. p. 1262-1298
- Perkins, D.D., & Long, D.A. 2002. Neighborhood Sense of Community and Social Capital: A multi-level analysis. In A. Fisher, C. Sonn, & B. Bishop (Eds.), *Psychological sense of community: Research, applications, and implications*. New York: Plenum. p. 291-318
- Perkins, D. D., Brown, B. B., and Taylor, R. B. 1996. The ecology of empowerment: Predicting participation in community organizations. *Journal of Social Issues*, 52. p. 85-110.
- Patton, M. (1990). *Qualitative Evaluation and Research Methods*. Beverly Hills, CA: Sage. 1990. p. 169-186.
- Patten. Mildred L. 2005. *Understanding Research Methods: An Overview of the Essentials*. Pyczak Publishing; 5 edition. May 2005.
- Prezza, M., Amici, M., Roberti, T., & Tedeschi, G. 2001. Sense of community referred to the whole town: Its relations with neighboring, loneliness, life satisfaction, and area of residence. *Journal of Community Psychology*. Vo. 29. No. 1. 2001.
- Schumacker, RE. and Lomax, R.G. 2010. *A Beginner’s Guide to Structural Equation Modelling*. Third Edition. New York: Routledge, Taylor and Francis Group.

Chapter 6

MIGRATION DECISION IN RURAL AREA

6.1.Introduction

Migration decision is commonly influenced not only by economic aspect but also by social aspect of home countries and host one. The factors driving migration decision are widely explored in the literature. In the economic perspective, there are two types of factors that have an impact on migration decision. Micro level or individual base is the first factor affects it, such as expected income, job and educational opportunities, health quality and/or better provision of social benefits Gibson & McKenzie (2011) and Kennan & Walker (2011), and among others. The second type is attributed to the macro level, political and economic conditions of a country, such as war and revolution, taxation policy, quality of governance, and public goods provision (Alesina & Zhuravskaya (2011), Greenwood (1997), and among others.

The lower costs to migrate due to advances in transportation improvement and technology information make the traditional barriers to migration dramatically reduced. Hence, the true underlying preferences for international movement can be

revealed. In the face of lowered barriers, international movement might not be primarily economically motivated (Massey et al., 1999, and Borjas, 1994) but rather be an expression of social motive. There is a growing body of literature concerning social motive and migration, especially in developed countries. One important question concerning the extent to which the influence of social networks is significant on top of the role of the traditional factors.

At the microeconomic level, it is important to understand the exact role of social networks in the migration decision. As noted by Dolfin and Genicot (2010), migrant networks can facilitate migration in three different ways: through providing information about the migration process itself; through providing information about jobs at the destination and aiding integration after arrival; and through helping to finance the costs of migration. Recent work provides support for the role of networks in finding jobs at migrants' destinations. Using Mexican rainfall as an instrument for the size of migrants' US networks, Munshi (2003) found that larger networks substantially improve Mexican immigrants' likelihood of US employment. The role of networks in alleviating migration costs has been investigated by McKenzie and Rapoport (2007, 2010), who discovered evidence suggesting that community networks tend to lower costs, especially for the less educated. Orrenius and Zavodny (2005) noticed that having a father or brother who has migrated to the US increases the likelihood of migration for males.

Giulietti et al (2014) attempted to analyze internal migration in China (rural-urban migration) and employ the concept of strong and weak ties. The results indicate that both concepts weak and strong ties matter in the migration decision process, although the impact of weak ties is higher than that of strong ties. Besides,

the results also show that one underestimates the effect of social networks on migration by not taking into account the strong ties in the mobility process, and the weak and strong ties act as complements in the migration decision, which indicates that the interactive effect between weak and strong ties is particularly strong above a certain threshold of the size of weak ties.

This chapter differs from the previous chapter in the data used, social capital approach and method of analysis. In chapter 5, the empirical proof utilized the psychological concept of social capital, while in this chapter; we employed the concept of “social ties” known as strong and weak ties. In the previous chapter, it is found that there are some relations between social capital and migration based on the duration of works. We concluded that household with higher social capital tends to send the family members as migrant workers.

The aim of this chapter is to empirically prove the effect of social ties as social capital construct on households’ migration decision. This chapter tries to measure the relation between social capital and migration using the concept of ‘social ties’. It is a concept explained by different factors, some of which are observable, while others are unobservable to the researcher. Observable factors are data from the survey related to the demographic characteristics (income, education, gender, family members, type of migration, and duration of works); while for unobservable factors are data from questions in the questionnaire survey. We measured this relation with the answers of questions in questionnaire survey about the migrants’ feeling to their living environment/village, their neighbor's and how their feeling to the place. In addition to the data from migrant household respondents, we add data from non-migrant household respondents, and we try to investigate whether the result in

chapter 5 is different from this chapter or not.

6.2.Social Capital Formation

Social capital is created within relationships (Coleman, 1990; Massey and Espinosa, 1997; Portes, 1998). It facilitates individual rational pursuits (Coleman, 1988) and assists in one's ability to make use of relationships with other individuals to improve economic well-being (Portes, 1996).

Although there are competing definitions of social capital (see Bjørnskov 2007; Reimer et al. 2008), the idea of social relations through network interactions is always present. Reimer et al. (2008), for example, describe social capital as ‘the social network and their associated norms that may facilitate various types of collective action’. Coleman (1988) explained community social capital as the social relationships that exist among people and the relationships they have with institutions in the community.

The network concepts of density and homogeneity could be used to characterize the links in a network. For example, a tie from a dense and homogenous network could be assumed to be “strong” or “bonding.” Intra-community or intra-familial ties are referred to as “bonding” ties and extra-community or extra-familial ties are referred to as “bridging” ties. This concept is based on the work of Granovetter, Burt, and Lin which is the foundation for the recent popular literature where “strong” and “weak ties” have come to be called “bonding” and “bridging” ties (Gittell & Vidal, 1998).

In this chapter, we constructed social capital formation from the concept strong and weak ties and we combined it with the concept of place attachment. Place

attachment is the deep emotional bond or connection that people develop toward specific places over time via repeated positive interactions. Human geographers have explored the concept of “sense of place”, as “the psychological or perceived unity of the geographical environment”, which is similar to the notions of place attachment and place identity as developed in environmental psychology (Lewicka, 2008).

6.3.Method

To measure social capital as relation or interaction between individual, we addressed these issues in the analysis by using factor analysis and structural equation modeling (SEM) techniques. We established the validity of the indicators of an unobserved phenomenon (social capital) through factor analysis and its predictors (the characteristics of individuals/respondents, their living environment and activity in the community) through an analysis Structural Equation Model (SEM).

In this chapter, the concept of social capital includes in three fundamental construct: ties with neighbors, ties with community and sense of place. The three construct are regarded as latent variable that are not directly observable and can only be approximated by selected indicators. The three constructs are theorized to be positively related (indicated by the headed arrows linking the circles) and not related in a causal way. Thus, we can see ties with neighbors and ties with community necessarily resulting in sense of place or sense of place and ties with neighbors necessarily resulting in ties with community. How the relation between social capital constructed, and the formation are our goal in this study. In this model, the levels of the constructs are considered being influenced by the specific characteristics of

individuals. Individual characteristics comprise a variety of socio-demographic, income, occupational, education and etc.

We integrated this analysis with choice model in migration decision. We developed general methodology to integrate of observed exogenous variable, latent variables and discrete choice of migration. The resulted methodology is an integration of latent variables model, to operationalize and quantify the unobservable concepts with discrete choice methods. The methodology incorporated indicators of observed variables (attribute data from income, education etc) and latent variables provided by responses to survey questions to aid in estimating the model.

Analysis is conducted in two stages. The first stage involves principal component analysis (PCA) to understand the relationships across social capital variables concerned with ties with neighbors, ties with community and place attachment. PCA allows us to determine patterns of association and measure the validity of defining social capital either as a single construct or as a series of constructs. In the second stage, we conduct structural equation model analysis (SEM), which uses the information from the previous stage to determine the degree to which social capital reflecting of the three factors constructs, and fitting structural equation model of respondent social capital attributes (latent variables) with respondent-level predictors comprising selected characteristic attributes (income, education, family members and occupation) as observed variables. SEM is multivariate regression in which the response variable in the regression equation may become predictor in another equation (Schumacker and Lomax, 2010). This allows us to account for correlations and to distinguish direct and indirect effects of our exogenous and latent variables on social capital formation. For estimation where the dependent variable is a

dichotomous outcome (binary discrete choice model), we use the robust (mean- and variance adjusted) method of Weighted Least Square (WLS) also known as WLSMV (Muthén and Muthén, 2012). We employed this calculation in Mplus software. Mplus offers a convenient way to simultaneously estimate both the discrete choice and the latent variable part of the ICLV (Integrated choice and latent variable) model (Temme et al, 2008). They have shown and validated that ICLV models can be estimated with Mplus.

6.3.1. Model Development

We develop general methodology to integrate of observed exogenous variable, latent variables and discrete choice of migration. The resulting methodology is an integration of latent variables model, to operationalize and quantify unobservable concepts with discrete choice methods. The methodology incorporated indicators of observe variables (attribute data from income, education etc) and latent variables provided by responses to survey questions to aid in estimating the model. For the calculation we use Mplus software.

6.3.2. Framework and Definition

The integrated modeling framework, shown in Figure 6.1, consists of two components, a choice model and latent variables model.

As with any random utility choice model (RUT) (Mc Fadden 1974; Mc Fadden 2001; Temme et.al 2008), decision maker utility U_n for each alternative is assumed to be a latent variable, and observable choices y_n are manifestations of the underlying utility. Observed variables that manifestation of latent constructs are called *indicators*.

We use a dashed arrow to representing a *measurement equation* links the unobservable U_n to its observable indicator y_n . *Structural equation* (i.e., the cause-and-effect relationships that govern the decision making process) link the observable and latent variables (X_n, X_n^*) to the utility U_n represented by solid arrow.

The latent variables that influence the choice process is integrated choice and latent variable model. We use *structural equation* modeling to related the observed exogenous (the explanatory) variables X_n to the unobserved latent variables X_n^* . While the latent variables are not observed, we could calculate using indicators that observed. The indicators allow identification of the latent construct using a response to survey questions related to sense of place, ties with neighbors and ties with community.

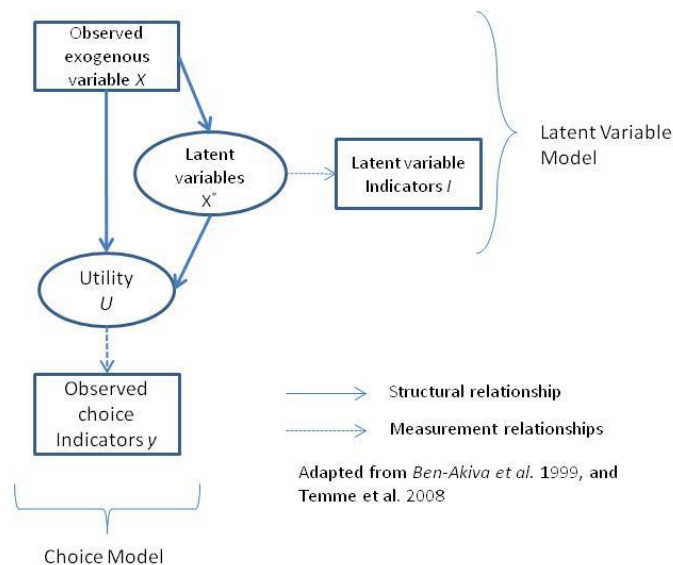


Figure 6.1. Framework for integrated choice and latent variables model

6.4. An Empirical Research

In some areas, the economics and the social capital of migration are converging and overlapping (Portes 1996). Economics can incorporate social ties and

non-economic decision factors in order to be more realistic. Social capital research can draw on economic models in rational choice theory and the social embeddedness of migration decisions to enhance theoretical clarity and concreteness. Theoretical models, especially when adapted to a specific issue, and fragments of empirical evidence in several fields, show that social ties as social capital play a major role in migration.

This chapter presents the empirical evidence of two chapters. Chapter 4 explains the relation between individual investments in social capital and migration decision in the theoretical model of migration based on economic approach. This chapter and chapter 5 attempt to prove the empirical result of social capital relation as an individual ties in migratory behavior. The following chapter is intended to provide an idea of the different research methods on how ‘social ties’ of the respondents influence their migration decision.

6.4.1. Description of the survey

To illustrate the model in an applied setting, we used data from the field survey which was conducted in November 2012 and February 2014. Through systematic sampling, 250 households living at Arjowilangun village, Kalipare district, Malang regency, East Java Province Indonesia, were selected as the respondents for the study in the first survey and 250 households’ respondents in second survey. Five hamlets were selected which cover Pangganglele, Lodalem, Lotekol, Duren and Barisan. Data are collected by employing face to face interview method that was effectively done within 7 days by 10 surveyors with interview schedule from 7.00 AM to 9.00 PM.

In this chapter, we focus upon 500 respondents divided within two types of respondents (migrant and non-migrant household respondents). From the field survey, we may understand that it is difficult to get the valid numbers of migrant household because the data between village and district level are different. The data are even not fully accurate. If we refer to the data from village level (Arjowilangun in Figures 2012), we may have large enough sample. Nevertheless, we can argue that we employed statistically sufficient number of sample for the purpose of the research. Afterwards, in this research we assume that individual respondents' preference on choice might be seen as a household's decision, since once he or she decides to migrate or not, it becomes the choice of each representative household. We may also use the term of 'respondent' and 'household' interchangeably.

In this research, we collected data base of two aspects of variables which consist of observed variable and latent variable. We created 4 (four) demographic questions to each respondent in the questionnaire sheets covering income, occupation, education, and family members for characteristic attributes. In order to measure the social capital level, we designed 12 questions related to the feeling of the respondents toward their living environment/village and their neighbors. These 12 questions represented our concept of social capital formation divided in three constructs: ties with community, ties with neighbors and sense of place. Last, in order to know respondents' activities in the community, we designed 13 questions to ask their participation in the community activities. The data make us able to construct social capital formation and how its relation with the decision to migrate.

6.4.2. General Description of Research Area

In general, the total area of Arjowilangun village (Figure 1) covers 1,598.01 Ha, whereby the land use is dominated by: (i) paddy and dry field (80.09% or 1,279.95 Ha), (ii) government plantation and forest (4.69% or 75.02 Ha), open space (1.50% or 23.98 Ha); and (iii) residential (13.70% or 219.07 Ha). This village lies at 293 m above sea level, at a distance of 22.5 km to the capital city (Malang Regency) and about 6 km to the district centre (Kalipare district). Total inhabitants in Arjowilangun village (2011) are 13,637 consist of 6,476 male and 7,161 female, and consists of 3,470 households. Main livelihood of villagers is (i) agriculture sector (50.58%); (ii) small medium enterprise (21.69%); and (iii) works in service/commercial sector (27.73%).

6.5.Results

6.5.1. Lesson Learned from the Previous Chapters

Chapter 3 explains about the data from the respondents. Chapter 3 portrays the results of household questionnaire survey covering six demographic characteristic of the households (migrant and non-migrant household), issues on migration and their relation to the neighbors and living environment. We measured the relation between the respondent and their village-their neighbors by the questions in the questionnaire survey. We investigated the relation between social capital and migration decision by using questions regarding to the respondents' activities to the community activities.

In chapter 4, we try to develop a theoretical model of migration. We assume, that there are individuals in different generation (young, adult and old) living in three time periods. The interactions between individuals have influenced them to invest in social capital or human capital when they are young. The investment decision would

have an impact to their decision when they are adult, stay in home country or migrate. We employ the theory of overlapping generation model to explain this relation. They will migrate if the wage during migration is more than the wage in the home country plus social capital that they will get if they stay.

Chapter 5 explains about the decision of respondents between to migrate and stay base on the duration of work in the host countries. In this chapter, we construct social capital formation based on psychological sense of community, which consists of sense of community, neighboring and sense of place. These three constructs are designed as latent variables, measured by the indicator from the questions in questionnaire survey, with the question related to their opinion and feeling about their living environment (village) and their neighbors. We can prove in this chapter that the level of social capital have relation to the activity in the community and the duration of work by employing structural equation model.

6.5.2. Descriptive Statistic

In this chapter we used 500 respondents, who consists of 250 non migrant household respondents and 250 migrant household respondents. We compare four characteristic of respondents as observed variables with the same questions in the questionnaire survey between migrant and non-migrant respondents, such as: income, education, family members and occupation.

Firstly, we calculated by using cross tabulation analysis to analyze the relation among characteristic of respondents. It was obtained that only the relation between income-occupation and occupation-education indicates strong relation (chi square test value 0,00 and 0,017 respectively, less than standard value 0,05). Moreover, the

result is not significant: 0,668 for income-family members, 0,365 for income and education, 0,146 for family members and education, and the last 0,995 for family members and occupation.

Secondly, we calculated the relation between respondents characteristic and 12 questions related to social capital measurement. Table 6.1 depicts the best result of cross tabulation with chi square test value for the relation of demographic attributes and 12 questions about values and belief to village and neighbors. The 12 questions are to describe respondents' opinion related to their values and belief about their living environment and neighbors using 5 scales in which, from 5 meaning very much (extremely yes) to 1 meaning least (extremely no). The questions are as follow: (Y1) Place attachment to your village as your hometown; (Y2) Nature and landscape of your village is nice; (Y3) Foodstuff of your village is nice; (Y4) Important to involve in community events activities; (Y5) Important to consult people who are in trouble; (Y6) Important to keep daily communication with neighbors; (Y7) Important to respect ancestors and manage community grave; (Y8) Important to communicate with relatives living in the village; (Y9) Neighbors are very important for me; (Y10) Neighbors will take care of my children and my parent when I am going abroad; (Y11) Neighbors will help me and my family when we have some economic troubles; (Y12) Want to continue living in this village.

Table 6.1. Chi square test (Pearson value) between demographic attributes and 12 questions related to values and belief to village and neighbors

Attributes	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12
Income	0.332	0.190	0.077	0.089	0.819	0.887	0.341	0.347	0.593	0.423	0.364	0.025
Occupation	0.153	0.070	0.670	0.387	0.167	0.824	0.312	0.032	0.528	0.006	0.237	0.083
Family Members	0.020	0.053	0.448	0.272	0.589	0.484	0.864	0.765	0.451	0.315	0.207	0.630
Education	0.041	0.521	0.000	0.430	0.332	0.180	0.268	0.035	0.024	0.285	0.583	0.028

The result of 500 respondents (migrant and non-migrant) points out that only education has strong relation with indicators for construct of social capital (Y1, Y3, Y8, Y9, and Y12). There are almost values of chi-square test more than p values < 0.05 standard. It means that their feeling to the place and neighbors is not significantly influenced by the characteristic of respondents' attributes.

The relation of each characteristic attribute and the values and belief to their village and neighbors are shown in Figure 6.2-6.5. We took one example and describe in figure for each characteristic of respondents with social capital constructs (only for significant result). Figure 6.2. explains the relation between income and question no 12, intention to continue their living in the village. The interesting result from this figure is the relation between the income and the answers of the questionnaire (Figure 6.2). Respondents with income more than 5,000,000 IDR or 5,000 JPY responded more on the answer 'extremely yes' than on the answer 'yes, no comment, no or extremely no'. Respondents with income less than regional wages ($\leq 1,500,000$ IDR or 1,500 JPY) mostly answered 'extremely yes', which is higher than the others. It means that for respondents who have income less than or the same with the regional level tends to live in the village than who has income more.

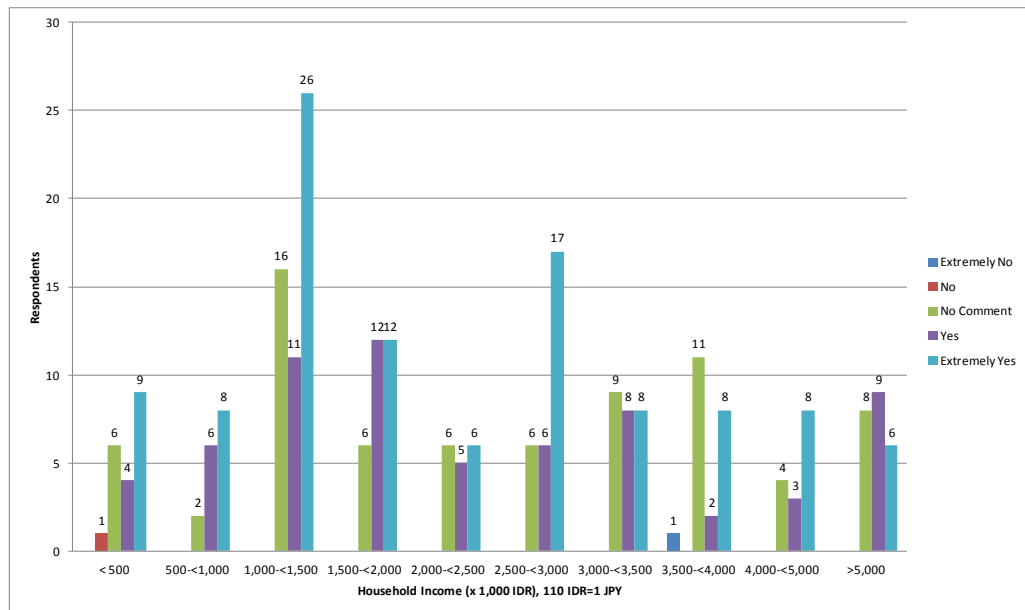


Figure 6.2. The relationship between income and Y12

After income, we show the relation between occupations and question no 10 (Y10) neighbors will take care of my children and my parent when they need help. The value is 0,006 (significant), it mean that occupation the respondents has relation with their feeling to trust their neighbors. Figure 6.3. shown that occupation as farmers, house maid and private company that they answered no comment more than yes or extremely yes. However, for others profession they answered yes and extremely yes more than no comment or no. It seems that their occupation has relation to their feeling to trust their neighbors.

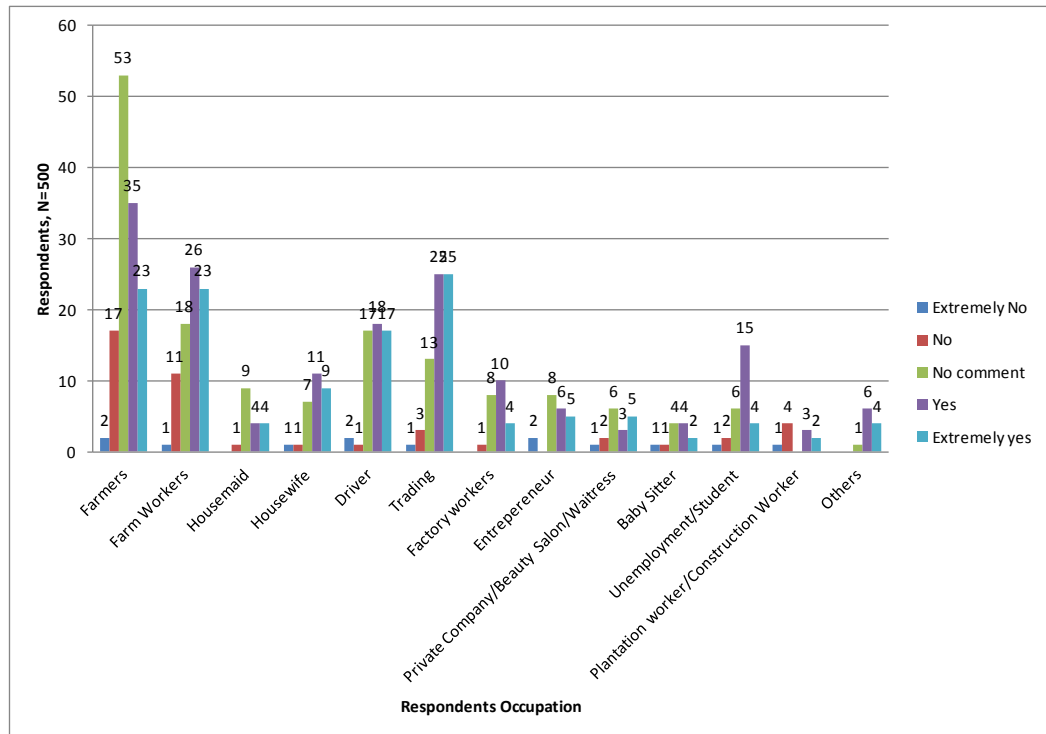


Figure 6.3. The relationship between Occupation and Y10

Next is the relation between the numbers of family in each household with question no 1 (Y1) place attachment to their village as their hometown. 0.02 is the result of chi square calculation between family members and the answers of question (Y1) Place attachment to your village as your hometown. This value indicates significant relation. Figure 6.4. shows the relation in different way, where the number of the respondents who answered yes and extremely yes is more than the number of respondents who answered no comment, no and extremely no. In the family with member 3 and 4 , it seems that they almost answered yes and extremely yes.



Figure 6.4. The relationship between Family Members and Y1

Question no 9 (Y9) is about whether neighbors are very important for me. In this question, we would like to know the respondents' feeling to their neighbors as the construct of social capital (ties with neighbors). The cross tabulation calculation, between education and this question shows that the value is below the standard (0,024, standard value 0, 05). It means that the answers of the respondents and their education have relation. Respondents with higher education have relation to their neighbors (Figure 6.5.). In junior high school level or lower, there are 8 respondents (2%) who answered 'extremely no', it means that they did not believe in their neighbors. When their education increases they tend to believe in their neighbors. In undergraduate or higher level, all respondents answered their belief to their neighbors. In higher level of education (junior high school, high school and undergraduate), it seems that they believe to their neighbors. Their answer yes and extremely yes more than no comment, no and extremely no.

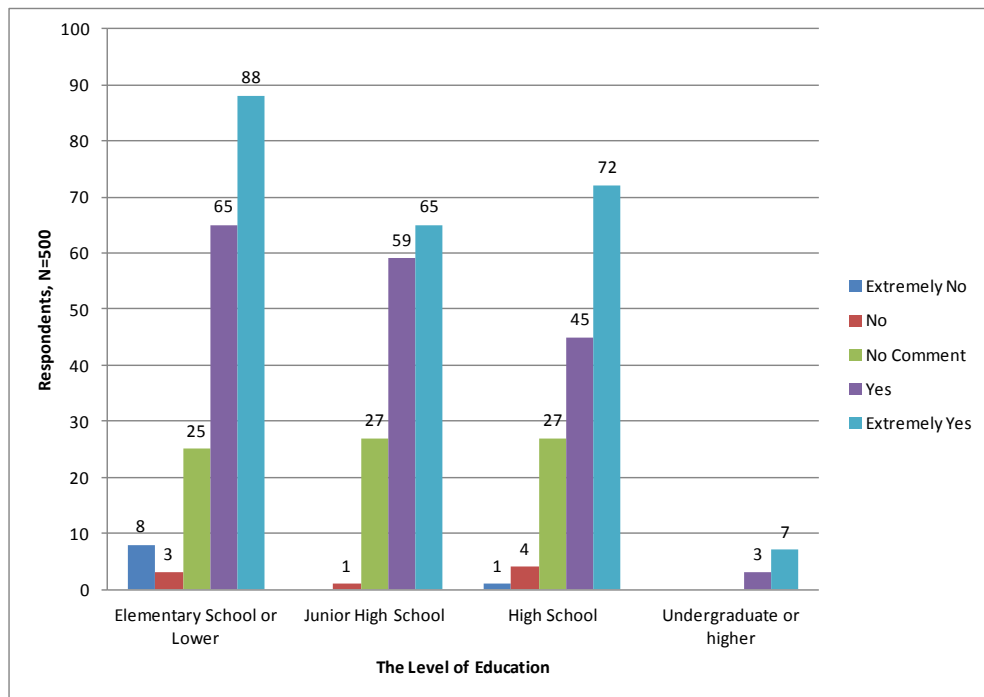


Figure 6.5. The relationship between the level of education and Y9

6.5.3. Explanatory Variables

The analysis in this chapter is based on a dataset collected by the author, including about 12 indicators in the questionnaire survey representing the “structural” dimensions of social capital. In the household questionnaire survey, we investigated characteristic attributes for each household respondent which consists of income, education, family members, and occupation, divided into migrant households and non-migrant households, Table 6.2 depicts the best result of chi-square test for each characteristic attribute in dummy variable. In general, for the sample size of 500 respondents, we might conclude that only one attribute: education which the derive value does not exceed the tabled critical value of chi-square equal to 3.84 at $p < 0.05$ with $df=1$ (Coolidge, 2006). Thus, we may consider household attribute of education as explanatory variables in the estimation model.

Table 6.2. The chi-square test for demographic attribute in dummy variable

	Education		Income		Family Members	
	$\leq$ ES	$>$ ES	$\leq$ 1,5 Million	$>$ 1,5 Million	$\leq$ 4	$>$ 4
Migrant	54	196	147	103	201	49
Non Migrant	136	114	148	102	183	67
Dummy	$\leq$ ES = 1		$\leq$ 1,5 Million = 1		$\leq$ 4 = 1	
p	0.0		0,928		0.057	
χ^2	57.8		0.08		3.367	

In migrant respondents, there are only 54 respondents who have education background of elementary school or lower (21.6%). However, the number of non-migrant households is higher, 136 respondents or 54.4 percent. Since almost less than half of the respondents have lower level of education in elementary school, we propose dummy variable for respondents whose level of education are lower than or equal to elementary school as 1, and 0 otherwise. The critical value of the respondents' level of education shows at 57.8 which is exceeding the critical value. It indicates that education background and choice to migrate are dependent. In other words, we may argue that respondents with education level at lower than or equal to elementary school have higher tendency not to migrate as reflected in Table 6.1.

In the questionnaire survey, the respondents were asked to reveal their household monthly income, divided into seven categories. The minimum wage in Malang Regency (UMR), as decided by the government in 2013, is IDR 1,343,700 or JPY 13,437. Based on this, we propose dummy variable for respondents whose level of income are lower than IDR 1,500,000 as 1 and 0 otherwise. The critical value of level of income respondents' show at 0.08.8 is not exceeding the critical value. Therefore, the income is independent for the decision whether to migrate or not.

We divided the family members in the research are as: (i) family with 1 member, (ii) family with 2 members, (iii) family with 3 members, (iv) family with 4 members, (v) family with 5 members, (vi) family with 6 members (vii) family with 7 members and (viii) family with 8 members. Average number of family in the household is 4 members. The derive value of $\chi^2=3.367$ does not exceed the tabled critical value of chi-square. Similar to income, it is indicated that family size and choice to migrate are independent.

6.5.4. Principal Component Analysis

The first phase of our analysis is assessing the presence of factors that will explain the construct of social capital. Principal component analysis (PCAs) is performed on latent variables construct, measures of ties with community (i.e. bonding social capital), weak ties among friends, and neighbors as ties with neighbors (i.e. bridging social capital) and place attachment (sense of place). A varimax rotation assumes that factors are independent of each other's. PCA is a method of data reduction wherein the process it groups correlated variables into uncorrelated variable factors (Fabrigar et al., 1999).

We use PCA in four-factor restriction (Table 6.3). Factor 1 is related to variables Y5, Y6, Y8 and Y9, Factor 2 to Y1, Y2 and Y12, Factor 3 to variables Y10 and Y11 and Factor 4 to variables Y3 and Y7. The first factor accounts for 39.2% of variance. Variables loaded on this factor mostly refer to “ties to community”. The second factor accounts for 9.8% of variance and describes the relation to place, being a symbol of “sense of place”. The third factor accounting for 8.8% of variance refers to “ties to neighbors”, and the last, the fourth factor, accounts for 7.4% of variance as

“collective efficacy/empowerment”. We exclude Factor 4, since we only use Eigen value more than one ($EV > 1$) for this research.

Table 6.3. Rotated Factors Loadings

Variables	Factors Loading			
	Factor 1	Factor 2	Factor 3	Factor 4
Y1. Place attachment to your village as your hometown	0.123	0.738	0.215	0.107
Y2. Nature and landscape of your village are nice	0.164	0.714	0.070	0.289
Y3. Foodstuff of your village is nice	0.065	0.426	0.121	0.601
Y4. Important to involve in community events activities	0.423	0.506	-0.034	0.290
Y5. Important to consult people who are in trouble	0.626	0.348	0.313	0.063
Y6. Important to keep daily communication with neighbors	0.813	0.173	0.198	0.166
Y7. Important to respect ancestors and manage community grave	0.242	0.000	0.105	0.786
Y8. Important to communicate with relatives living in the village	0.639	0.137	0.037	0.421
Y9. Neighbors are very important for me	0.813	0.202	0.178	0.067
Y10. Neighbors will take care of my children and my parent when they need help	0.266	0.220	0.771	0.014
Y11. Neighbors will help me and my family when we have some economic trouble	0.123	0.046	0.858	0.171
Y12. Want to continue living in this village	0.276	0.721	0.081	-0.112
Eigen value	4.710	1.178	1.056	0.892
Contribution ratio (%)	39.252	9.815	8.801	7.437
Cumulative contribution ratio (%)	39.252	49.067	57.869	65.306

*the question adopted from Jeong et al. (2011)

The factor loadings obtained show the presence of three distinct factors underlying the construct of social capital, which align themselves with characteristics associated with ties with community, ties with neighbors and sense of place, and confirm our theoretical assumptions. The loadings are the strongest for the ties with community as factor 1 are (Y6) important to keep daily communication with neighbors (0,813) and (Y9) neighbors are very important for me (0,813). Loadings for sense of place factors range from 0,714 to 0,738, while those for ties with neighbors factors are the highest 0,858 in Y11.

6.5.5. Integrated Choice and Latent Variable Analysis

This study proposes more than one latent variable (i.e., sense of place, ties to communities, and ties to neighbor) that explains the causal relationship among

observed variables based on structural equation and applies structural equation model (SEM). The level of social capital interprets from the relationship between sense of place, ties to community and ties to neighbors. We used the data from non-migrant and migrant respondents as observed variable to measure the relation between social capital and decision to migrate.

6.5.6. Estimation of the model

The next stage of the analysis involves running structural equation model (SEM) with Mplus analysis software. Structural equation modeling (sometimes called path analysis) employed to gain additional insight into causal models and explore the interaction effects and pathways between variables. This analysis (SEM) gives us more rigorously test whether our data supports our hypotheses.

Models were tested using SEM goodness of fit tests to determine if the pattern of variances and covariances in the data is consistent with structural (path) models theoretically specified. In this chapter, we presented three models with goodness of fit. We use the factors constructed by the above PCA analysis as a basis for determining exogenous latent variables for SEM analysis. The result configures the path, relationship between latent variables and observed variables based on principal component analysis.

Firstly, before conducting the principal component analysis on values and belief to their village and neighbor (Y), we have performed proximity interpretation of each variable. For interpretation, it is possible to classify Y into three groups as follows: Y1, Y2 and Y12 focus on “sense of place”, Y6, Y7, Y8, Y9 as “ties to community” and Y10, Y11 focus on “ties to neighbors”.

Next, we conducted an SEM analysis on the correlation between independent variables to understand the indirect effects. SEM is multivariate regression in which the response variable in the regression equation may become predictor in another equation (Schumacker and Lomax, 2010). This allows us to account for correlations and to distinguish direct and indirect effects of our exogenous and latent variables social capital formation. For estimation where the dependent variable is a dichotomous outcome (binary discrete choice model), we use the robust (mean- and variance adjusted) method of Weighted Least Square (WLS) also known as WLSMV (Muthén and Muthén, 2012). In general this method is preferable to Maximum Likelihood (ML) estimation when the data are severely non-normal distributed (Olsson et al, 2000). Since the decision (migrate or not) is dichotomous we use SEM with binary probit regression for these paths towards our main dependent variable.

We test several different model specifications which are shown in Table 6.4. The result of structural equation model between latent variables (sense of place, ties with community and ties with neighbors) and observed variables (Y's variables and Z' variables) are shown. In order to design a path, we adopt the model having goodness of fit higher than 2 (RMSEA, CFI and TLI).

For the individual and regional attributes and community activities variables, we designed a path based on the goodness of fit of each model. We finally selected variables and model structure with the highest estimation accuracy (model 3, Table 6.4.).

Model 1 is constructed without direct paths in line with our initial binary logistic regression model. The R-square is high as 83% indicates that our predictive power is good and we have good fit for RMSEA = 0.046, however we have a quite low

another model fit (CFI = 0.410; TLI = 0.682; and WRMR = 2.329) hence we test alternative model structures to find the best fit model.

Model 2 provides a better model fit (reduced Chi-2/df; RMSEA = 0.034; CFI = 0.90; TLI = 0.870; and WRMR = 1.038). In this model we include the impact of ties with community to migrant decision, and income to sense of place and ties with neighbors.

Table 6.4. Structural equation modeling

Latent Constructs	Path		Model 1 (n=500)		Model 2 (n=500)		Model 3 (n=500)		
			Est	t-stat	Est	t-stat	Estimate	S.E.	T stat
Y1	←	Sense of place	1		1		1		
Y2	←	Sense of place	0.877	10.481***	0.892	11.238***	0.886	0.083	10.706***
Y5	←	Ties with community	1		1		1		
Y6	←	Ties with community	1.141	14.028***	1.100	13.609***	1.101	0.081	13.627***
Y8	←	Ties with community	0.848	12.357***	0.892	11.783***	0.834	0.071	11.810***
Y9	←	Ties with community	1.104	12.784***	0.931	12.351***	1.087	0.088	12.375***
Y10	←	Ties with neighbors	1		1		1		
Y11	←	Ties with neighbors	0.822	9.922***	0.766	9.485***	0.766	0.081	9.486***
Y12	←	Sense of place	0.881	9.650***	0.931	9.924***	0.922	0.092	10.015***
Structural Model (Figure 6.5)									
Ties with community	←	Income			-0.005	-0.405***	0.017	0.009	1.827*
Sense of place	←	Income			0.046	2.597***	0.060	0.016	3.724***
Ties with neighbors	←	Family Members			-	-	0.214	0.066	3.242***
Migrant Decision	←	Ties with community			0.475	5.331***	0.456	0.086	5.292***
Migrant Decision	←	Education			0.843	6.815***	0.842	0.124	6.819***
Ties with community	←	Ties with neighbors			0.237	5.214***	0.237	0.045	5.214***
Ties with community	←	Sense of place			0.580	9.219***	0.576	0.062	9.246***
Ties with neighbors	←	Sense of place			0.774	8.617***	0.771	0.089	8.639***
Effect on activities in community									
ACT1	←	Ties with community			0.137	4.429***	0.141	0.030	4.622***
ACT2	←	Ties with community			0.091	1.888*	0.087	0.047	1.870*
ACT3	←	Ties with community			0.172	2.242**	0.170	0.076	2.239**
ACT4	←	Ties with community			0.175	1.996**	0.176	0.087	2.008**
ACT5	←	Ties with community			0.211	1.639*	0.209	0.127	1.643*
Thresholds			0.338	4.648***	0.431	2.239***	0.431	0.192	2.239***
R Square			0.831		0.881				
Model Fit									
Chi-2/df				2.055		1.591		1.342	
RMSEA				0.046		0.034		0.026	
CFI				0.682		0.900		0.944	
TLI				0.660		0.870		0.925	
WRMR				2.329		1.038		0.853	

*Correlation is significant at the 0.1 level

**Correlation is significant at the 0.05 level

***Correlation is significant at the 0.01 level

Our final model is Model 3 with the best model fit (CMIN/DF = 1.342, CFI = 0.944, TLI = 0.924 and RMSE 0.026). In general with binary outcomes at N>250, CFI>0.95, TLI>0.95, RMSEA<0.05 and WRMR<1 can be indications of good models (Yu, 2002). CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root-Mean-Square Error of Approximation; WRMR = Weighted Root Mean square Residual (WRMR is suitable to evaluate models with non-normally distributed outcomes). The structure of this model is further illustrated in Figure 6.6.

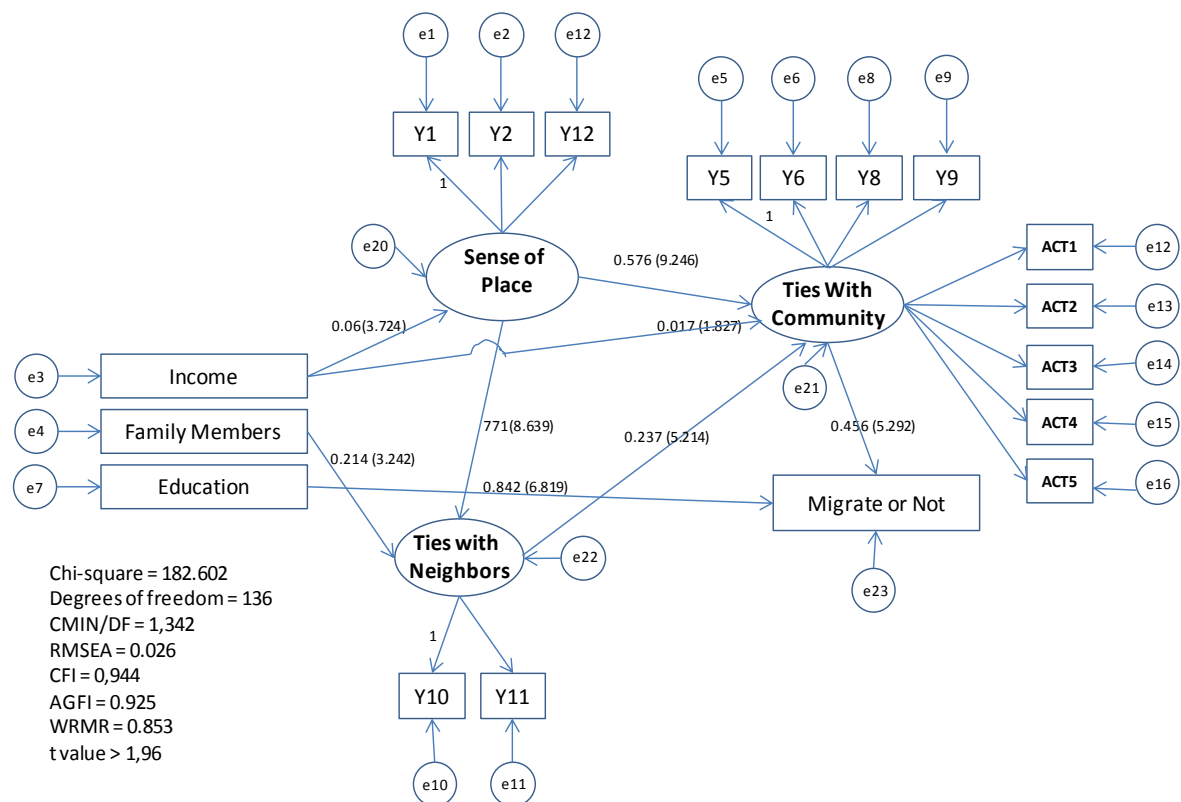


Figure 6.6. Structural Equation (SEM) Model 3

Furthermore, there are significant paths for migration decision from the latent variable ties to communities and observe variable education. Our interpretation is that education influences the decision to migrate, so we include to the model direct

effect from education to migration decision (observed variable migrate or not). Ties to community are constructed by the four variables suggested by the PCA which all are found significant though the importance of the exogenous variables varies. Income has direct path to sense of place and ties with community, and family members giving impact on ties with neighbors. The relation among social capital construct shows that sense of place has direct paths to ties with community and ties with neighbors, and ties with neighbors has direct path to ties with community. This result confirms our chosen construct name, i.e. the ties to community are the central theme for this construct.

Education directly influences *migration decision*. Though we find this effect significant, it is a weak effect as the combined indirect effect of education is 0.842. The path confirms our observation that ones with higher education, probably choose to migrate, while the ones with lower education choose to stay.

Figure 6.5 and Table 6.5 demonstrate that the respondents who have sense of place have significant impact on ties with neighbors and have impact on ties with community. The estimated value from ties with community to decision to migrate is 0.456 and the t value (C.R) is more than 1.96 (5.292). It means that if the ties with community are higher, then it will have a significant effect to their decision to migrate than to stay.

Table 6.5. SEM Model Estimation and Standardized Effects (SE)

Latent Constructs	Path		Estimate	S.E.	C.R.	P
Ties with community	←	Income	0.017	0.009	1.827	*
Sense of place	←	Income	0.060	0.016	3.724	***
Ties with neighbors	←	Family Members	0.214	0.066	3.242	***
Migrant Decision	←	Ties with community	0.456	0.086	5.292	***
Migrant Decision	←	Education	0.842	0.124	6.819	***
Ties with community	←	Ties with neighbors	0.237	0.045	5.214	***
Ties with community	←	Sense of place	0.576	0.062	9.246	***
Ties with neighbors	←	Sense of place	0.771	0.089	8.639	***

*Correlation is significant at the 0.1 level

***Correlation is significant at the 0.01 level

In this chapter, we have proposed two hypotheses, (i) communities and households with higher social capital will not send their family members as migrant workers; and (ii) communities and households with higher social capital tend to send their family members as migrant workers.

By observing the result, we have confirmed our second hypothesis that communities and households with higher social capital tend to send their family members as migrant workers. These results in this chapter support our result analysis in chapter 5.

6.6. Policy Implication

Covariance structure analysis results shows that people tend to migrate when they believe in their neighbors and living environment and the level of education has significant value to increase the tendency to migrate.

On the study migration in rural area, it is necessary for policy measures to increase the education level of inhabitants in rural area. Using the proposed covariance structure model of migration decision, we can understand the causal relationship between decision to migrate and observed variables (education). Due to the

unpredictable conditions in destination country, it is better to send migrant with high level education than low level education.

6.7. Summary and conclusions

In this chapter, we have assessed level of social capital by using three constructs: ties to community, ties to neighbors and sense of place. We design that respondent's value and believe in their village and neighbors as construct of social capital.

The aim of this study is to investigate the relationship between social capital and migration. The analysis is based on the survey in Arjowilangun village which is typical migrant rural area in Indonesia. To find response to the question, whether the level of social capital in the community have an impact on the number of migration, Section 6.2 first describes the concept of social capital formation and analyses it based on the previous studies. We found the possibility of forming social capital from the concept of social ties which consists of ties with community, ties with neighbors, and sense of place. In Section 6.3, we present the method of the analysis that will be used in this chapter, consists of model development, and framework and definition. In this section we explain the integration of latent variables and choice of decision. Section 6.4. explains an empirical research which consists of description of survey and general description of research area. Section 6.5. presents result and discussion, which consists of lesson learned from the previous chapters and explains the analysis of cross tabulation to measure the relation among demographic attributes, respondents' opinion about their living environment (village)-neighbors and on the community activities. Next, we explain the respondent participation on the community activities and examine the component to measure social capital. Principal

component analysis was used to define the variable for each factor of latent variables and to present the covariance structure analysis to understand the relationship between latent variables and observed variables. From the structure of the model, we could estimate the relation between social capital and migration. The next is section 6.6, which explains the policy implication regarding the result of the research.

Using structural equation model that we employed in Mplus software, the result of our study shows that ties to community positively have a significant impact to the decision of respondents (migrate or not). Besides, education as observed variable directly influences the migration decisions. It seems that higher level of education have impact on migration decision. Due to the uncertainty in the host country for the potential migrant it was better to have higher education for them. We have confirmed our first hypothesis that households with higher social capital send their family members as migrant workers. The same with the result of chapter 5, the result in this chapter is different with theoretical model in chapter 4.

Even though our theoretical model different with the empirical data, and we are not able to fully test these facets of social capital, it is possible that all these elements from social capital construct could provide the respondents with an adequate level about the decision to migrate or not.

A further contribution of this chapter lies in the fact that it suggests and demonstrates a convenient alternative for estimating ICLV (incorporated latent variables) models with an SEM software package in social capital empirical research. From a substantial point of view, ICLV models can be considered as one of the most interesting advances in discrete choice modeling in the last decade. Still, applications in social capital and related fields are scarce. The major reason for this lack of

popularity is most likely the fact that researchers consider the full information estimation of ICLV models too complicated. This result is in line with Temme et al (2008) result, that they have shown and validated in a separate Monte Carlo study that ICLV models can be estimated with the Mplus program (Muthén and Muthén 2012). Additional research with a broader set of social capital constructs offers promising avenues for better understanding social capital formation in Indonesian rural area.

Bibliography

- Alesina, A., and E. Zhuravskaya (2011): Segregation and the Quality of Government in a Cross-Section of Countries, *American Economic Review*, 101(5), 1872–1911.
- Bjørnskov, C., (2007). Determinants of generalized trust: A cross-country comparison. *Public choice*. 130(1-2), 1-21.
- Borjas, G. J. 1994. The Economics of Immigration. *Journal of Economic Literature*, 32, 1667-1717.
- Bollen, K. and Long, I. 1993. *Testing Structural Equation Models*. Newbury Park, CA: Sage
- Coleman, J., (1988). Social Capital in the Creation of Human Capital. *The American Journal of Sociology*. 94, 95-120.
- Coleman, J., (1990). *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.
- Dolfin, S. and G. Genicot (2010), What do networks do? The role of networks on migration and “coyote” use,” *Review of Development Economics* 14, 343-359
- Gibson, J., and D. McKenzie (2011): The Microeconomic Determinants of Emigration and Return Migration of the Best and Brightest: Evidence from the Pacific, *Journal of Development Economics*, 95(1), 18–29
- Greenwood, M.(1997): Internal Migration in Developed Countries. In Rosenzweig, M. and O. Stark (eds.) *Handbook of Population and Family Economics*, Ch.12, Vol. 1B, North Holland.
- Giulietti C., Akgüç M., and Zimmermann KF., 2014. The RUMiC longitudinal survey: fostering research on labor markets in China. *IZA Journal of Labor & Development* 2014.
- Hu, L. and Bentler, P. 1999. ‘Cutoff criteria in fix indexes in covariance structure analysis: conventional criteria versus new alternatives’, *Structural Equation Modeling*, 6(1): 1_55.

- Israel, Glee D. 1992. Determining Sample Size. Program Evaluation and Organizational Development, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: November 1992.
- Jeong, H., Matsushima K. and Kobayashi K. 2011. Identity and Communication in Marginal Rural Area—Case Study of Nichinan Town in Japan, Journal of Society of Civil Engineers, Ser.D3, Vol. 68 No.5. 2012. p.I_499-I_511 (in English).
- Kennan, J., and J. Walker (2011): The Effect of Expected Income on Individual Migration Decisions, *Econometrica*, 79(1), 211–251.
- Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A. & Taylor, J. E. 1999. *Worlds in motion: Understanding international migration at the end of the millennium*, Oxford, Oxford University Press.
- McKenzie, D. and H. Rapoport (2007), “Network effects and the dynamics of migration and inequality: Theory and evidence from Mexico,” *Journal of Development Economics*, 84, 1-24.
- McKenzie, D. and H. Rapoport (2010), “Self-selection patterns in Mexico—US migration: The role of migration networks,” *Review of Economics and Statistics* 92, 811-821.
- McFadden, D. (1974). Conditional logit analysis of qualitative choice behaviour. *Frontiers in Econometrics*. P. Zarembka. New York, NY, Academic Press: 105-142.
- McFadden, D. (2001). Disaggregate Behavioral Travel Demand’s RUM Side: A 30-Year Retrospective. *The Leading Edge of Travel Behavior Research*. D. Heshner. Oxford, Pergamon Press.
- Muthén, L.K. and Muthén, B.O. (2012). *Mplus User’s Guide*. Seventh Edition. Los Angeles, CA: Muthén & Muthén.
- Munshi, K. (2003), “Identification of network effects: Mexican migrants in the US Labor market,” *Quarterly Journal of Economics* 118, 549-597
- Olsson, U.H., Foss, T., Troye, S.V., and Howell, R.D. 2000. The performance of ML, GLS, and WLS Estimation in Structural Equation Modeling under conditions of misspecification and nonnormality. *Structural Equation Modeling* 7(4): 557-595.
- Orrenius, P. and M. Zavodny (2005), “Self-selection among undocumented immigrants from Mexico,” *Journal of Development Economics* 78, 215-240.
- Patton, M. 1990. *Qualitative Evaluation and Research Methods*. Beverly Hills, CA: Sage. 1990. p. 169-186.
- Patten, Mildred L. 2005. *Understanding Research Methods: An Overview of the Essentials*. Pyczak Publishing; 5 edition. May 2005.
- Portes, A., and Landolt, P., (1996). The Downside of Social Capital. *The American Prospect*. 26, 18-21

- Portes, A., (1998). Social Capital: Its Origins and Applications in Modern Sociology. *Annual Review of Sociology*. 24(1), 1-24
- Prayitno, G., Matsushima K., Kobayashi K., Jeong H. 2014. Social Capital and Migration in Rural Area (A Case of Malang Regency, Indonesia). *Procedia Environmental Sciences-Elsevier*, Volume 18, 2014.
- Reimer, B., T. Lyons, N. Ferguson, and G. Polanco. 2008. Social capital as social relations: The contribution of normative structures. *Sociological Review* 56(2): 256–74.
- Schumacker, RE. and Lomax, R.G. 2010. *A Beginner's Guide to Structural Equation Modelling*. Third Edition. New York: Routledge, Taylor and Francis Group.
- Temme, D., M. Paulssen and T. Dannewald (2008). "Incorporating Latent Variables into Discrete Choice Models - A Simultaneous Estimation Approach Using SEM Software." *BuR - Business Research* 1(2): 230-237.
- Yu, C.Y. (2002). Evaluating cutoff criteria of model fit indices for latent variable models with binary and continuous outcomes. Doctoral dissertation, University of California, Los Angeles.

Chapter 7

CONCLUSION AND RECOMMENDATION

7.1. Conclusion Remarks

This research attempts to develop a theory as well as an analytical model of household's interaction as an essence in social capital formation. Thus, the research presented in this dissertation may enrich theory and model in varied disciplines covering engineering, economic and social science. Furthermore, as an empirical research, it could bring a possibility for developing better policy in migration, particularly in the case of developing countries.

In this research we are able to prove our first hypothesis that community with higher social capital tends to send family members as migrant workers. We construct social capital formation from the concept of social ties. Social ties among respondents are reflected by their social interactions and participation in community activities. Social capital formation that is constructed by ties with community, ties with

neighbors and sense of place have the significant relations, and this relation as latent variable constructs could explain the decision of respondents' choice.

This chapter concludes and summarizes the entire chapter in the dissertation. Each chapter has been thoroughly discussed and deliberated within the scope of works aimed for the study. In a brief manner, we summarize every chapter in this dissertation as follows:

7.1.1. Chapter 1

This chapter describes the basic idea of the research about social capital and migration decision, research objectives, rationale of the research, research methodologies as well as contribution of the research to the body of knowledge. Final subsection of the chapter describes the structure of the dissertation.

In this chapter, the motivation to conduct this research, the hypotheses, the results and findings, as well as the novelty of our research are outlined. This research attempts to develop theory as well as analytical model of household's decision choice and social ties as an essence in social capital approach.

7.1.2. Chapter 2

In this chapter, we try to investigate the literature review about social capital formation constructed by the concept of social ties and place attachment. First, we explain the concept of social capital as a wide concept. The investment in social capital which is as social interaction among individuals and the social capital formation are explained in this chapter. The concepts of social ties are explained with strong ties (bonding social capital) and weak ties (bridging social capital). A strong tie is relation between individual and his/her close friend or relative, and a weak tie is

relation with community or not close friends and families. Social capital is used to measure how these relationships occur; whether higher social capital will motivate people to work abroad or not.

Second, we explain the concepts of migration, migration network, and migration and social capital. There are some studies that examine the relationship of social capital and migration (see Palloni et al. 2001; Liu, 2011; Stark and Dorn, 2012; and Abramitzky et al, 2012. Nevertheless, as far as I concern, there are no researches incorporating the relation between social capital as latent constructs and decision choice (migrate or stay). Besides, this research attempt to develop theoretical model based on the decision choice of respondents about investment of social capital, human capital and the relation with decision choice (migrate or stay) based on the theory of overlapping generation model.

7.1.3. Chapter 3

Chapter 3 portrays the results of household questionnaire survey covering six demographic characteristic of the households (migrant and non-migrant household), issues on migration and relation to their neighbors and living environment. We measured the relation between the respondent and their village-their neighbors by the questions in the questionnaire survey, and we investigated the relation between social capital and migration decision by using questions regarding the respondents' activities to the community activities.

Based on chi square analysis, we might explain the relation between individuals characteristic attributes and the formation of social capital. We designed the constructs of social capital formation from 12 questions in the questionnaire survey, which indicate latent constructs (unobserved variables). The results of analysis show

that from six attributes, income and type of migration have significant value in the chi square test, and it indicates that income and type of migration have relation to the formation of social capital. Another attributes such as family members and occupation have significant value only with some activities and attribute's education, and gender has no relation. The results indicate that income has a significant effect to decision choice (migrate or stay).

The data from migrant households indicates that attributes data could explain the decision choice of respondents. We used attribute data the duration of works, to measure the significant value of the relation. It seems that the longer the duration of work, the higher the level of social capital. In addition to that, an individual who has higher level of social capital has higher possibility to choose to migrate and work longer. The data shows that almost respondents extend the duration of the contract. The first time contract is for 2 (two) years.

The data also shows that for migrant respondents, the decision choices (migrate or stay) were at the time they are growing adult. Migrant respondents have three stages of life, starting from child, adult, and old. They invest in social capital and human capital when being child, and choose to migrate when growing adult and return back when getting old. If they choose to migrate they should return back after completing the contract duration. From this finding, we developed theoretical model of migration decision in the next chapter (Chapter 4).

7.1.4. Chapter 4

In contrast with the previous chapter as well as the next chapters, the discussions here are focusing on the economic model of migration. It emphasizes on individual behavior decision between investing in social capital or in human capital and the

relation with migration decision.

Chapter 4 explains the process of developing the model. First, based on the previous chapters where the current condition of migration decision in rural area is explained, we developed the basic framework of the model. According to the clarification process resulted from data collection and interview process, we formulated the problem and developed the basic model theoretically. In the model we emphasized the decision of individual in young, adult and old generation through the theory of overlapping generation. This model explains how the relation between investment in social capital or human capital with the relation to migration decision.

The model could show that investment in social capital in young generation has significant effect to the decision choice in adult generation. In this chapter we can prove the second hypothesis ‘communities and households with higher social capital will not send their family members as migrant workers.’

7.1.5. Chapter 5

After developing theoretical model in Chapter 4, Chapter 5 is the first of two empirical evidence chapters. In this chapter, we use data only from migrant household respondents. This chapter examines the relation between social capital and migration using psychological concept. Social capital is explained as latent variables such as sense of community, sense of place and neighboring. This constructs will determine the level of social capital (higher or lower). Beside latent variables, we will relate it to observed variables to know the relation. Observed variables consist of demographic attributes, respondent values and belief to the village and neighbors and respondents activity in the community activities.

We employed structural equation model (SEM) based on the data from Chapter 3,

to calculate the relation between social capital and how the impact to activities in community. SEM is multivariate regression in which the response variable in the regression equation may become predictor in another equation (Schumacker and Lomax, 2010). AMOS Software could calculate the relation among construct of social capital as latent variables and observed variables. In this chapter, we calculate the level of social capital with the value of significance to observed variable duration of contract.

The result shows that our findings support our first finding in chapter 3, but different with theoretical model in chapter 4. By using a structural equation model (run in AMOS software), the household income, type of migration and education might have effect to latent variables that we have proposed. Social capital formations are shown by the significant values in statistical evidence. The level of social capital was measured by using observed variable the duration of work, and by using path in AMOS software we found the significant value. It indicates that the level of social capital has effect to the decision to migrate. Higher social capital tends to send more family members as migrant workers. In this chapter, we are able to prove our first hypothesis: communities and households with higher social capital tend to send their family members as migrant workers.

7.1.6. Chapter 6

Chapter 6 develops general methodology to integrate an observed exogenous variable, latent variables and discrete choice of migration. In this chapter, we developed social capital formation from the concepts of social ties (different with the social formation concepts in chapter 5). We employed all respondents' data (migrant

and non-migrant), analysis in structural equation model and calculated with Mplus program (Muthén and Muthén 2012) to measure the relation.

The resulting methodology is an integration of latent variables model, to operationalize and quantify unobservable variables with discrete choice methods. The methodology incorporated indicators of observed variables (six demographic attributes data: income, education, type of migration, gender, occupation, and family members) and indicators of latent variables (ties to neighbors, ties to community and sense of place) provided by responses to survey questions to estimate the model.

Using structural equation model that we employed in Mplus program, the result of our study shows that ties to community positively have a significant impact to the decision of respondents (migrate or not). Besides, education as observed variable directly influences the migration decisions. It seems that higher level of education has impact on migration decision. Due to the uncertainty in the host country for the potential migrant, it is better for them to have higher education. We have confirmed our first hypothesis that households with higher social capital send their family members as migrant workers.

Even though the result in this chapter is different with our theoretical model in chapter 4, our current model so far could explain the relation between social capital and decision choice.

7.2.Recommendation for Future Research

It goes without saying that this dissertation has some limitations and constrains. The focus of this study is to investigate the relation between social capital and

decision to migrate from rural area in Indonesia. The other aspects such as political effect are not within the scope of this study.

The following are among area that could provide potential ideas for future research:

- This research is an individual based empirical research of social capital and migration decision choice, which of the social capital formation could be constructed by psychological concept and social ties concepts. The formation of social capital is explained firstly by the questions on the questionnaire survey related to the feeling of respondents about the values and believe to their neighbors and living environment; secondly by the questions in questionnaire survey related to respondents participation in the community activities. This construct could be expanded by the designed data collection related to the closeness relation of the houses, group memberships and policy simulation shock to the theoretical model.
- In this research, we are able to develop a theoretical model of migration in Chapter 4 and test the model in empirical evidence in Chapter 5 and 6. From the result in chapter 5 and chapter 6 are different with our theoretical model, so the extension steps by using model estimation to measure whether the model is good or not should be done in the next research.
- It looks promising to develop new analysis based on the data and theoretical model for the level of social capital among individuals' interaction in rural area and their decision choice. Therefore, it is necessary to scrutinize into more details about the relation of social capital and migration decision choice, which

we may assume that there is a significant influence from the key person in the village or from government policy.

Bibliography

- Abramitzky R., Boustan L.P., Eriksson K., 2013. Have the poor always been less likely to migrate? Evidence from inheritance practices during the age of mass migration. *Journal of Development Economics* 102 (2013) 2-14
- LIU, Mao-Mei. 2011. Migrant Networks and International migration: Testing Weak Ties. MAFE Working Paper 14. Departament de Ciències Polítiques i Socials. Universitat Pompeu Fabra. Barcelona, Spain.
- Muthén, L.K. and Muthén, B.O. (2012). *Mplus User's Guide*. Seventh Edition. Los Angeles, CA: Muthén & Muthén.
- Palloni, Alberto., Douglas S. Massey, Miguel Ceballos, Kristin Espinosa, and Michael Spittel. 2001. Social Capital and International Migration: A Test Using Information on Family Networks. *American Journal of Sociology*, Vol. 106, No. 5. March 2001. p. 1262-1298
- Schumacker, R.E. and Lomax, R.G. *A Beginner's Guide to Structural Equation Modelling*. Third Edition. New York: Routledge, Taylor and Francis Group. 2010.

APPENDIX 1
HOUSEHOLD MIGRANT QUESTIONNAIRE

Length of interview

Time initiated:

Time terminated:

I. General Information

1.1. Village

1.2. Hamlet

1.3. Address of selected household:

House Number

Other details

Interviewer: Supervisor:

1.4. Who is the respondent?

- a. Migrant itself, b. Husband/Wife, c. Father, d. Mother, e. Grand Father, f. Grand Mother, g. Son, h. Daughter, i. others (.....)

1.5. The range of household income per month: (in Rupiah)

- | | |
|-----------------------|-----------|
| Less than 500.000 | [] 1 |
| 500.000 – 1.000.000 | [] 2 |
| 1.000.000 – 1.500.000 | [] 3 |
| 1.500.000 – 2.000.000 | [] 4 |
| 2.000.000 – 2.500.000 | [] 5 |
| 2.500.000 – 3.000.000 | [] 6 |
| 3.000.000 – 3.500.000 | [] 7 |
| 3.500.000 – 4.000.000 | [] 8 |
| More than 4.000.000 | [] 9 |
| Others | [] 10 |

1.6. Who is contributing to your household income?

- a. Head of household, b. Migrant, b. Husband/Wife, c. Father, d. Mother, e. Grand Father, f. Grand Mother, g. Son, h. Daughter, i. others (.....)

1.7. The household members:

Line No.	Name	Relation to the head of household	Sex 1.Male 2.Female	Age in Years Age as at the last birth day	Ethnic Group	Religion	Marital Status	Education	Occupation	Migration Status
1	Record the name of head the household first. List all the members living in this household including those who work as migrant and away from the home at the time of the survey	3	4	5	6	7	8	9	10	11
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
	Codes: Relationship to head of household	Marital Status								
	01 – Head of household	06 – Parents	01-Never married				Occupation			
	02 – Husband/wife	07 – Grand father/grand	02-Currently Married				1. Farmer		6. Construction,	
	03 – Son/daughter	08 – Brother/sister	03-Divorced/Widowed/Separated				2. Farm Workers		7. SME Owner and	
	04 – Son-in-law/daughter-in-law	09 – other relative					3. Plantation		8. Housemaid	
	05 – Grand son/grand daughter	10 – other					4. Plantation workers		9. others	
							5. Factory workers			

1.8.Question for IMWs or the Head of Household

No.	Question	Answers				
		1	2	3	4	5
1.8.1	Original work at Indonesia	Farmer	Farm Worker	Industry Worker	Building workers	Other
1.8.2	How much money did you get every month at Indonesia?	≤500.000	500.000-1.500.000	1.500.000 - 2.500.000	2.500.000 - 3.500.000	More than 3.500.000
1.8.3	Information about migrant					
	Migration (Where?)	International	Local			
	Type of work	House Maid	Factory	Plantation	Construction	Other
1.8.4	Monthly salary as IMWs?	< 1.500.000	1.500.000 - 2.500.000	2.500.000 - 3.500.000	3.500.000 - 4.500.000	> 4.500.000
1.8.5	How long you work as migrant workers?	< 1 year	1 - 2	2-3	3-4	More than 4 year
1.8.6	How can you receive/send remittance?	Using Bank or legal Institution	Using agency	Bring by friend	Bring by myself	Other

II. Social capital Measurement

2.1. Question about values and beliefs toward to the village and neighborhood residents

Variables	Extremely yes (5)	Yes (4)	No comment (3)	No (2)	Extremely no (1)
Place attachment to your village as your hometown					
Nature and landscape of your village is nice					
Foodstuff of your village is nice					
Important to involve in community events activities					
Important to consult people who in trouble					
Important to keep daily communication with neighbors					
Important to respect ancestors and manage community grave					
Important to communicate with relatives living in the village					
Neighbors are very important for me					
Neighbors will take care of my children and my parent when I am going abroad					
Neighbors will help me and my family when we have some economic trouble					
Want to continue living in this village					

2.2.The community activities within higher the ratio non-participation to participation and do not know the existence of the activities

No.	Activities	≤1	2	3	4	≥5	Hamlet or RT/RW	Village or District
2.2.1	Village meeting and hamlet or RT/RW meeting							
2.2.2	Village cooperative meeting							
2.2.3	Religious activities (Muludan, Ramadhan, sedekah and etc.)							
2.2.4	Cultural festival							
2.2.5	Working together to clean street, pavement local road and etc.							
2.2.6	Sport even at independent day (17 August each year)							
2.2.7	Social Gathering (Kenduri, Arisan)							
2.2.8	Food services (give food for the others)							
2.2.9	Tradition (Rewangan, Nyumbang, helping each other when someone have party)							
2.2.10	Promotion of agriculture and small enterprise							
2.2.11	Helping elderly people							
2.2.12	Political Party							
2.2.13	Union Labor							
2.2.14	Any others activities? Specify							

APPENDIX 1B

HOUSEHOLD NON MIGRANT QUESTIONNAIRE

Length of interview

Time initiated:

Time terminated:

I. General Information

1.9. Village

1.10. Hamlet

1.11. Address of selected household:

House Number

Other details

Interviewer: Supervisor:

1.12. Who is the respondent?

- a. Migrant itself, b. Husband/Wife, c. Father, d. Mother, e. Grand Father, f. Grand Mother, g. Son, h. Daughter, i. others (.....)

1.13. The range of household income per month: (in Rupiah)

- | | | | |
|-----------------------|---|---|----|
| Less than 500.000 | [|] | 1 |
| 500.000 – 1.000.000 | [|] | 2 |
| 1.000.000 – 1.500.000 | [|] | 3 |
| 1.500.000 – 2.000.000 | [|] | 4 |
| 2.000.000 – 2.500.000 | [|] | 5 |
| 2.500.000 – 3.000.000 | [|] | 6 |
| 3.000.000 – 3.500.000 | [|] | 7 |
| 3.500.000 – 4.000.000 | [|] | 8 |
| More than 4.000.000 | [|] | 9 |
| Others..... | [|] | 10 |

1.14. Who is contributing to your household income?

- a. Head of household, b. Migrant, b. Husband/Wife, c. Father, d. Mother, e. Grand Father, f. Grand Mother, g. Son, h. Daughter, i. others (.....)

1.15. The household members:

Line No.	Name	Relation to the head of household	Sex 1.Male 2.Female	Age in Years Age as at the last birth day	Ethnic Group	Religion	Marital Status	Education	Occupation	Migration Status
										11
1	Record the name of head the household first. List all the members living in this household including those who work as migrant and away from the home at the time of the survey	3	4	5	6	7	8	9	10	Non-Migrant
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
	Codes: Relationship to head of household	Marital Status					Occupation			
	01 – Head of household	06 – Parents	01-Never married				1. Farmer		6. Construction,	
	02 – Husband/wife	07 – Grand father/grand	02-Currently Married				2. Farm Workers		7. SME Owner and	
	03 – Son/daughter	08 – Brother/sister	03-Divorced/Widowed/Separated				3. Plantation		8. Housemaid	
	04 – Son-in-law/daughter-in-law	09 – other relative					4. Plantation workers		9. others	
	05 – Grand son/grand daughter	10 – other					5. Factory workers			

II. Social Capital Measurement Question

2.3. Please check one column in this table to describe your opinion about your living environment using 5 scales where 5 means very much until 1 means least meaning.

Variables	1	2	3	4	5
I feel proud of this area/community					
I think nature and landscape of your village is great					
I think foodstuff of our village is nice					
I think it is important to involve in community events activities					
I think it is important to consult people who in trouble					
I think it is important to keep daily communication with neighbors					
I think it is important to respect ancestors and manage community grave					
I think it is important to communicate with relatives living in the village					
I think neighbors are very important for me					
I think neighbors will take care of my children and my parent when I need help					
I think neighbors will help me and my family when we have some economic trouble					
I want to continue living in this village					

2.4. Did you participate or not for the following activities?

No.	Activities	Participate	Not Participate
2.1.1	Village meeting and hamlet or RT/RW meeting		
2.1.2	Village cooperative meeting		
2.1.3	Religious activities (Muludan, Ramadhan, sedekah and etc.)		

2.1.4	Cultural festival		
2.1.5	Working together to clean street, pavement local road and etc.		
2.1.6	Sport even at independent day (17 August each year)		
2.1.7	Social Gathering (Kenduri, Arisan)		
2.1.8	Food services (give food for the others)		
2.1.9	Tradition (Rewangan, Nyumbang, helping each other when someone have party)		
2.1.10	Helping elderly people		
2.1.11	Political Party		
2.1.12	Union Labor		
2.1.13	Any others activities? Specify		