Socio-economic conditions of transmigrants in Bulungan regency, North Kalimantan Province

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Abstract. This research was conducted to determine the socio-economic conditions of transmigrants placed in the Salimbatu Placement Transmigrant (LPT), Tanjung Buka, and Selimau. The study was conducted using a sample survey and collection methods as well as analyzing secondary data. The sample survey was carried out on 10% of the total number of transmigrant households in the study area. Determination of the sample is done in stages, first determining the sample area of three LPTs at random, secondly setting a sample of transmigrant household heads. The results showed that the transmigrants placed in the study area were not fully prosperous as expected. The indications are: (1) their agricultural production is low, on average only around 216 kg of rice / head of household / year, far below 320 kg of rice / head of family / year according to the poverty line of Sayogyo [1], (2) the income of transmigrants classified as "moderate" when compared with the minimum wage in force in the district of Bulungan in 2015, (3) the reduction in the area of their arable land from the original 1.5 ha / head of household obtained from the government, became only an average of 1.2 ha / head of family; and (4) the frequency of planting and harvesting rice on average only once a year. The above conditions are mainly caused by: (1) the low fertility status of their agricultural land; (2) irrigation of rice fields which only depends on the tides of river or swamp water; (3) the number of plant pests (wild boar, rats and birds); and (4) still limited or difficult access to and from their territory. The transmigrants try to overcome these obstacles or obstacles in a number of ways: (1) looking for part-time work, and (2) adapting to natural conditions, both culturally (by changing habits in the area of origin) and ecologically. However, not all obstacles can be overcome and not all transmigrants have succeeded in overcoming the obstacles. Thus assistance is needed to help transmigrants improve their welfare, so that the main objective of the transmigration program, namely reducing poverty and improving people's welfare can be achieved. The assistance needed includes: (1) building a swamp water system, so that transmigrants can work on rice fields and grow rice throughout the year (for the long term), or provide water pumping machines to irrigate their fields from rivers, due to rivers in the area studies never dry throughout the year; (2) subsidizing the price of fertilizers and anti-pest medicines; (3) building a road network that connects all Transmigrant Settlement Locations in the transmigration area (for the long term), or for short-term assistance in providing water transportation facilities (motorized boats) to the transmigrant group.

1. Introduction

1.1. Background of Study
Transmigration is one of the Indonesia Government’s program to address population problems, especially inequality of inter-island population spread and poverty in Java, Bali, and Lombok.
(Jambal); in addition to two other population problems in Indonesia today, namely large numbers and high growth rate. The population of Indonesia is currently ranked fourth in the world after China, India, and the United States; which is 261, 006, 394 [2]. While the growth rate is 1.49% over the last year; higher than the world growth rate of only 1.13% [3].

The Transmigration Program is almost only found in Indonesia and relatively non-existent in other countries. This program needs to be supported by various stakeholders; considering that until now the spread of population in Indonesia is still very lame. Until 2010, most of Indonesia’s population, ± 61% live in Jambal which covers only ± 6.6% of the total area of Indonesia. In contrast, only ± 39% of Indonesians live outside of the three islands, which are ± 93.4% of the total area of Indonesia (Statistics Center Body, 2017). Like a ship that’s sailing, Jambal is almost drowned because of excess passengers.

At the beginning of its implementation (in 1905) by the Dutch East Indies Government, the program was intended to reduce poverty in Java, which began to be seen from its increasing population density. At that time the program was known as “colonization”; starting with the transfer of 155 family heads from Kedu Residency in Central Java to Gedongtataan in South Lampung. The program was expected to improve the socio-economic conditions in Java [4].

Since the beginning of the Five Year Development (Pelita) I (at the beginning of the New Order era) there has been a reorientation of the implementation of a more development-oriented transmigration program in the destination areas; not merely moving the population from the densely populated islands to another that is still sparsely populated. But the goal of this program to reduce poverty and improve the socio-economic condition of society is still important, especially for transmigrants. For this reason also they are willing to be transmigrated; even willing to migrate independently. What’s more in paragraph (2) of Article 1 of Law Number 29 of 2009 [5] on Amendment to Law Number 15 of 1997 concerning transmigration is still mentioned that: “Transmigration is the displacement of population . . . to improve welfare and stay in the transmigration area . . .”. Therefore, it is not an excessive expectation of Governor of Central Java (as one of province that sends transmigrant to Bulungan Regency) Ganjar Pranowo as delivered when supervising the transmigrant life of Bulungan Regency: “May Transmigrant Achieve Better Life”. Therefore, the success of the program objective should continue to be monitored and evaluated. For transmigration of food crops, monitoring and evaluation can be done through: (1) transmigrant income, (2) unemployment among transmigrants, (3) the proportion of transmigrants with part-time jobs, (4) the area of rice fields of transmigrant, (5) harvest frequencies, (6) paddy/rice production among transmigrant, and (8) the constraint faced by transmigrants.

1.2. Problem Statements
The main problem being observed in this research is designated to the following inquiries: First, how is the socio-economic conditions of the transmigrants in Bulungan Regency? Because even though there has been a shift in the main purpose of the transmigration program recently, namely the transmigration program as an instrument of regional development, but for the transmigrant, their main purpose remains the same, namely to improve their socio-economic conditions. Due to this reason, they are willing to be transmigrated.

Second, what kind of efforts done by the transmigrants in adapting themselves to the new environmental conditions in transmigrants settlements? Considering that the environmental conditions in transmigrants settlements (Kalimantan) are very different from those in their area of origin (Jambal). The farmlands in Jambal are generally located in the lowland or lush highlands because of its volcano and is one of the most fertile agricultural areas in the world [6], with irrigation depending on rainfall or technical irrigation. While in Kalimantan, rice fields are generally a swamp on the edge of the river, irrigation depends on the ups and downs of river water, the soil tends to peat and acidic. Part of East Kalimantan Province area (formly North Kalimantan Province) is a swam area, especially in areas around the river that generally have tender soil texture (Regional Office od the Directorate
The third question is what obstacles faced by transmigrants during their stay in transmigrants settlements? This question is asked because the differences in environmental conditions mentioned above in addition to demanding the adapting ability, obviously will cause a number of obstacles. Among these obstacles could be their relationship with indigenous people who never been the object of study [7].

The final question is, do the transmigrants manage to overcome the above obstacles? This question becomes an interesting research material, given the nature of Javanese farmers who were as static by Burger, less pioneering spirit [8].

1.3. Aim of the Research
This research is intended to find out the socio-economic conditions of transmigrants in Bulungan Regency general. Specific research was conducted on transmigrants in Salimbatu, Tanjungbuka, and Selimau Transmigrants Settlements. In addition, this research is also intended to identify the efforts made by transmigrants in adapting to their new environment, as well as the constraints faced by the transmigrants.

1.4. Scope of the Research
The focus of this research is lied upon the efforts to discover the socio-economic conditions of the transmigrants, and their efforts to adapt to their new environment, as well as obstacles they should face.

2. Result and Discussion

2.1. The Socio-Economic Conditions of Transmigrants
2.1.1. Transmigrant Activity in Salimbatu Settlement Location (LPT). The large proportion of transmigrants and their families in Salimbatu Settlement (LPT), i.e. 92.55% is the working labor force (Table 1). There are 2,255 labor force (43.35%) of 5,201 transmigrants. Transmigrants joined the transmigrations program of crops farming pattern, but in its development it seems that not all transmigrants become food crops farmers. This change occurred because they have been placed for too long in Salimbatu Settlement (since 1983); so the transmigrants recognize current global development and start switching professions that are considered more profitable, such as being worker in private companies (± 9.0%), especially in oil palm plantation companies that are widely available around the settlement; being freelance laborers (± 4.0%); and starting a business (± 3.0%). Working shifts are also done by transmigrants’ ancestors. In addition, non-agricultural employment is also done by local transmigrants, because local transmigrants are also deployed in the same location. However, the largest proportion (± 46.0%) is still farming; and ± 33.0% others as fisherman, especially river fisherman (Table 1).

It is reasonable that the largest proportion of the labor force is farmers since its original purpose is so. They plant rice by utilizing the high and low tide of river water and swamp. Similarly, the second largest proportion of the labor force in the living study area is river fisherman. It is reasonable because their settlement are surrounded by rivers. The largest river is the Kayan River, with several creeks. The fact that the third largest proportion of people work of private companies is that in the study area it is now starting to operate a number of private companies in forestry and plantation.
Table 1. Transmigrant and their families’ activities in Salimbatu Settlement, 2015

| Transmigrant and their families’ activities | Frequency Absolute | Relative |
|--------------------------------------------|--------------------|---------|
| Farming                                    | 962                | 46.09   |
| Fishering                                  | 694                | 33.25   |
| Private enterprise laborer                  | 167                | 8.00    |
| Freelance laborer                          | 91                 | 4.36    |
| Civil servants (included police and soldier)| 72                 | 3.45    |
| Self employed                              | 55                 | 2.64    |
| Others                                     | 46                 | 2.20    |
| Number of Working Force                    | 2 087              | 92.55   |
| Unemployed                                 | 138                | 6.12    |
| Temporarily unemployed                     | 30                 | 1.33    |
| Total labor force                          | 2 255              | 43.35   |
| Number of Non-Work force (taking care of household, school, and other) | 2 946 | 56.65 |
| Total population                           | 5 201              | 100.00  |

Source: 1. Salimbatu Village Office, 2015  
2. Field survey, 2015

Some transmigrant families (± 2.64%) are self employed/entrepreneurs; either having business by their own or helped by others. They are among others have activities in the field of trade and transportation. If those farmers are added to the “having business” group, then their proportions become larger.

2.1.2. The Education of Transmigrants and Their Families. The largest proportion of transmigrant families (38.96%) is only graduating from primary school. The second largest proportion (15.00%) does not even attend school; and the third largest proportion (14.14%) is high school educated (Table 2). Judging from the level of education, transmigrant and their families do not seem to be able to change their lives for better; because there are still those who never go to school; although this group is more dominated by the elderly (first generation transmigrants).

Table 2. The Education Level of Transmigrant’s in Salimbatu Settlement, 2015

| Population’s Educational Level | Frequency Absolute | Relative |
|-------------------------------|--------------------|---------|
| Uneducated                    | 780                | 15.00   |
| Not yet in school             | 600                | 11.54   |
| Pre-school                    | 90                 | 1.74    |
| Elementary school             | 2 026              | 38.95   |
| Middle/high school            | 1 320              | 25.38   |
2.1.3. Unemployment in Transmigrant’s Families. Unemployment among transmigrants was recorded at 6.41% (“moderate”) (Table 3). Among the villagers there is a generally “sharing activity” in the household; so it appears that the workforce in every household has jobs. So the actual rate of unemployment can be greater; because in the “working workforce “ also includes the te “half-unemployed” ie people who work but “the number of working hours is not enough” and “productivity is low”. It is alleged that those who are unemployed are transmigrant granchildren who already know the conditions outside the area, so are not willing to work as famers like their parents.

### Table 3. Open Unemployment Rate in the Study Area, 2015

| Location     | Number of Workforce | Number of Unemployment | Open Unemployment Rate | Category |
|--------------|---------------------|------------------------|------------------------|----------|
| Salimbatu    | 2,255               | 138                    | 6.123                  | Moderate |
| Tanjungbuka  | 179                 | 21                     | 11.73                  | Very high|
| Selimau      | 126                 | 5                      | 3.97                   | Low      |
| Study Area   | 2,560               | 164                    | 6.41                   | Moderate |

Source: Field survey, 2015.

2.1.4. Income Rate in Transmigrant Circle. Based on the sample survey of 10% of households (Patriach) it is known that the average income of the transmigrants was IDR 600,801 per capita per month or IDR 2,566,383 per household per month (with an average number of four people in a household) (Table 4). This condition is categorized as moderate.

### Table 4. Income Rate of Transmigrants in the Study Area, 2015

| Location     | Average per month (IDR) | Average number household member (person) | Category |
|--------------|-------------------------|-----------------------------------------|----------|
| Salimbatu    | 2,566,383               | 4                                       | Moderate |
| Tanjungbuka  | 3,523,642               | 5                                       | High     |
| Selimau      | 2,211,242               | 3                                       | Moderate |
| Study Area   | 2,566,383               | 4                                       | Moderate |

Source: Field survey, 2015.

2.1.5. Rice Field Area of Transmigrants. Each household of transmigrant farmers on average has an area ± 1.19 ha; with the smallest area of 0.05 ha and the largest 10 ha (Table 5). As an agricultural area where most of the population works as famers (Table 1) and each household has an average of four family members (Table 4), it means that each member of transmigrant household has an average field of about 0.30 ha. This condition is categorized as “medium”.

| Location   | Average number of field (ha) | Category |
|------------|-----------------------------|----------|
| Salimbatu  | 1.19                        | Medium   |
| Tanjungbuka| 1.05                        | Medium   |
| Selimau    | 1.19                        | Medium   |
| Study Area | 1.19                        | Medium   |
Ownership of this average rice field is greater than in the area of origin; because one of the requirements of transmigrant program participants in the pattern of crop agriculture is as farmers or farmers owning rice field < 0.25 ha (Decree of the Minister of Transmigration of the Republic of Indonesia No. KEP 124/MEN/1990 on Settlement Pattern and Development of Transmigration Business). However, when viewed from the average area of paddy fields per head of transmigrant households which is only 1.19 ha seems to have been the division of land by the head of transmigrant families to their grandchildren; because initially every head of the transmigrant family usually gets a quota of land from the government of two hectares: first business area (yard of 0.5 ha) and second business area (paddy field or dry land of 1.5 ha). It could be the diminished land ownership by the head of the transmigrants family because part of the land is sold. Since the establishment of North Kalimantan Province (where Bulungan Regency is located) and previously this region belonged to the territory of East Kalimantan Province; the price of land there began to rise and the transmigrants began to break up their lands in the National Land Registry Office [9].

Table 5. The Rice Field Area of Transmigrants in Study Area, 2015

| Field area (ha) and number of transmigrant’s household member | Location of Transmigration Settlement |
|--------------------------------------------------------------|---------------------------------------|
|                                                              | Salimbatu | Tanjungbuka | Selimau | Study Area |
| Average per household (ha)                                   | 1.41      | 0.96        | 0.92    | 1.19        |
| Average number of household number (person)                 | 4         | 5           | 3       | 4           |
| Average field area per capita (ha)                          | 0.35      | 0.24        | 0.31    | 0.30        |

Source: Field survey 2015

2.1.6. Frequency of Rice Harvest among Transmigrant Farmers. Most of transmigrants (74.60%) stated that they harvested paddy rice only once a year (“bad”) (Table 6). Judging from this, the lives of transmigrants have not been better than in their home areas. This happens because the irrigation of their field is still very dependent on the river water or swamp. While in their area of origin is usually still dependent on rain water or irrigation.

2.1.7. Paddy or Rice Production among Transmigrant Farmers. Production of paddy or rice per household of transmigrants average 865.68 kg per harvest. Because they only harvest once in a year on average, and each transmigrant household has an average of four members, it means that the average production per year per head is only about 216 kg (Table 7). This figure is below the Sayogyo [1] poverty line of 320 kg of rice per head per year. Thus transmigrants in the study area are categorized poor. For those who have part time jobs, the income from planting rice is still added to the from the jobs. However, only 27% of transmigrants have casual vacancies, for serious reasons; so the income from part time jobs does not mean much. These jobs include opening grocery stall, teaching Qur’an reciting, a laborer, and catching fish. Average transmigrant income is only a “moderate” scale (Table 4).

Table 6. Rice Harvest Frequency among Transmigrant Farmers, 2015

| Location      | Rice Field Frequency per year | Respondent Answering | Average Harvest (time) |
|---------------|-------------------------------|---------------------|-----------------------|
|               | once                          | Twice               | 3 times               | 4 times               |                             |
| Salimbatu     | 25 (29.41%)                   | 16 (48.48%)         | 0                     | 5                     | 46                           | 1.5                         |
| Tanjungbuka   | 35 (41.18%)                   | 1 (3.03%)           | 1 (33.33%)            | -                     | 37                           | 1.0                         |
| Selimau       | 25 (29.41%)                   | 16 (48.48%)         | 2 (66.67%)            | -                     | 43                           | 1.5                         |
| Study Area    | 85 (74.60%)                   | 33 (26.19%)         | 3 (2.38%)             | 5 (3.97%)             | 126                          | 1.0                         |

Source: Field survey, 2015
### Table 7. Rice Production among Transmigrant Farmers in Study Area, 2015

| Average Production (kg/harvest/transmigrant household) | Location       | Salimbatu | Tanjungbuka | Selimau | Study Area |
|--------------------------------------------------------|----------------|-----------|-------------|---------|------------|
| 969.31                                                 |                | 852.2     | 475.62      | 865.68  |            |
| 1,453.97                                               |                | 852.2     | 713.43      | 865.68  |            |
| 363.5                                                  |                | 170.44    | 237.81      | 216.42  |            |

Source: Field survey, 2015

2.1.8. **Productivity of Rice Field Owned by Transmigrants.** The productivity of field paddy in the study area was less than one ton per ha (± 854 kg/ha) (“very low”). This is caused by: (1) pests (rats and bird), (2) erratic water supply (highly dependent on the tides), and (3) low soil fertility (acid, peat) (Table 8).

### Table 8. Status of Soil Fertility in Study Area, 2015

| Sampling Location | Great Group | Fertility Status |
|-------------------|-------------|-----------------|
| P1                | Dystropepts | 0 – 30 cm       |
|                   |             | Low             |
|                   |             | 30 – 60 cm      |
|                   |             | Low             |
| P2                | Eutropepts  | 0 – 30 cm       |
|                   |             | Low             |
|                   |             | 30 – 60 cm      |
|                   |             | Low             |
| P3                | Tropohemist | 0 – 30 cm       |
|                   |             | Low             |
|                   |             | 30 – 60 cm      |
|                   |             | Low             |
| P4                | Tropudult   | 0 – 30 cm       |
|                   |             | Low             |
|                   |             | 30 – 60 cm      |
|                   |             | Low             |

Source: River Area Station (BWS) III of Kalimantan, 2015a and 2015b

2.1.9. **Land Use Patterns in Transmigrants.** Beside being used by the transmigrants as a yard, the land is also used for rice fields, farming, and gardening. In rice fields transmigrants plant rice using tidal river water and swamps. In the fields they generally plant rice fields. In this land they also have a garden, with fruit plant, especially rambutan and durian. Most of the land are still vacant, especially at certain times, like when the water is receding. So the transmigrants cannot plant field paddy all the year round; and this condition is still relatively the same as in their home area. But in their hometown there area transmigrants that only work farm laborers; while in the destination area they become farmers of their own lands.

2.1.10. **Land Price in The Study Area.** Land prices in the study area are still relatively cheap, given the still very vast land there. The current price of land (even if there is a transaction, given the infrequent transaction) is around IDR 20,000 to IDR 40,000 per square meter. The price in Tanjungbuka LPT is lower (IDR 20,000 – IDR 30,000), while in Salimbatu LPT IDR 30,000 – IDR 40,000. The low price of land in the study area, especially paddy fields is also due to low productivity; because the fertility rate is low (Table 8). However, as the development of North Kalimantan Province is growing, the price of land in Bulungan and Tanjungselor has also started to rise. This matter gained response from transmigrants who had long lived in Bulungan Regency [9].
2.1.11. Informal Economic Activities. Types of informal economic activities in the study area are very limited, among others: (1) coffee shop, (2) varieties shop, (3) taxibike driver, (4) traditional boat (ketinting) driver, and (5) peddler. This is common, given that the study area is still a village which location is relatively far from the city.

2.2. Obstacles faced by Transmigrants

2.2.1. Low Land Fertility. In Table 8, it can be seen that from four analyzed soil samples (according to the location, types and depth), all samples showed low fertility status. Thus, viewed from the agricultural crops pattern of transmigration, the transmigration settlement selection and preparation in the study area is not feasible for businesses such as mentioned in Article 25 of Law Number 29 of 2009 [5].

2.2.2. Field Irrigation which Depends on Tidal. After all this time, the transmigrant only rely on water from the tides to irrigate their field. This causes them can only grow rice once a year on average. This resulted in the low rice production (Table 7), and transmigrant income is also low (Table 4).

2.2.3. Limited and Difficult Accessibility. The access to the study area, especially from the capital Bulungan Regency (Tanjungselor) is usually done via river as the infrastructure and speedboat and traditional boat (ketinting) as a means. Similarly, access between villages and access from village to agricultural land, even access between Neighbourhood Associations is done also by using traditional boat (ketiniting) and boats as a means. River is the main transportation infrastructure, land transportation is very limited. Even from Salimbatu LPT to the outside of the area, it is found no road access.

2.2.4. Low Field Productivity. The low productivity of fields is caused by several factors: (1) low status of land fertility, (2) high number of pests (rats, pigs, and bird), and (3) non continuous water supply (depending on tide). This finding support the research result of Nasikun and team [10]: the land condition in east Kalimantan (including Bulungan Regency at he time) is unsuitable for food crops plantation, especially rice. The are with most extensive harvest and the production of paddy is Kutai Regency (which is now Kutai Kartanegera), Kuai Barat, Kutai Timur, and Mahakam Hulu). This also indicates that the suitable areas for rice fields are those areas which now has become that part of East Kalimantan (after the Territorial Reform); while Bulungan Regency has become the part of North Kalimantan Province.

2.2.5. Large Number of Pests. The large number of pests that attack crops such as pigs, rats, and bird have contributed to the low productivity of the transmigrants’s rice fields. Relatively there are no obstacle related to their relationship with indigenous people as feared by [7] mentioned above. Indeed there a number of local residents who ask for the members of the House of Representatives Commission to review the transmigration program in this area because it was considered as the cause of floods. But this statement was denied by Bulungan Regent [11].

2.3. Transmigrant Effort to Overcome Obstacles and Challenges in New Places

2.3.1. Seeking Part Time Jobs. Seeking freelance jobs is one of the transmigrant efforts in addressing their low income; although only small parts (± 40%) has a freelance job. The types of freelance known to the transmigrants include: (1) establishing a grocery stall, (2) a river fisherman, (3) a teacher of Qur’an recital, and (4) a construction worker.
2.3.2. Adapting to The New Environment. During all this time, the transmigrants work in the rice fields by relying on tidal water. This way of farming can be their adaptation to new environmental condition that are different from those in home regions (Jambal), which rely on rainwater (rainfed ricefield) or irrigation water.

Some transmigrants, especially local transmigrants, plant rice in swidden fields. Seen from Cultural Ecology, such a way of production is a cultural adaptation to the conditions of the natural environment around them. According to expert, shifting cultivation that is practiced by communities in tropical rainforest areas such as in this study area, is an exploitation technology or a means of production in common tropical rainforest areas have a number of limiting factors for the development of agricultural business: (1) high rainfall rate, above 200 cm per year, (2) plants are very sensitive to warning, though in short time, (3) varying temperatures throughout the year, (4) high solar exposure, (5) relatively small day-long diversity, and (6) high numbers of biota and abundance [12].

Another attempt by transmigrants to adjust it their environment is to use the river as a transportation infrastructure. A thing they generally never to in the area of origin. The obstacle is that they have not been able to make their own boat because they have no knowledge, and not enough money to buy one. So the transmigrants are relatively able to adjust to the physical environmental conditions in the destination area, but there has been no greater effort; such as buying a water pump to drain the river water into the fields. Natural constraints still remain an obstacle to improving their welfare. This lack of effort could be due to their poverty as well. So there is a vicious circle (involution). This does not mean, however, that transmigrants are static and less pioneering is evaluated by Burger and Warsito et al. [8] x as mentioned above. That they are willing to be transmigrated is already a proof that they are not static and possess pioneering spirit.

2.4. Transmigrant’s Success in Overcoming Obstacle and Challenges

Despite efforts and adaptations to new environment conditions, these attempts have not been fully addressed due to the extend and severity of the environment and they poverty brought by transmigrants; so they are less capable in facing it. Coupled with the environment conditions they face are too hard and too broad with relatively unspoiled conditions. There was even one of the transmigrants who said: "ibarate niki babat alas, mboten kados teng Jawi, negoro mpun dados – “it was like we are opening forest, miserable unlike in Java, everything is ready”.

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