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MULTI-SKILLED WORKERS AND ADEQUATE ENVIRONMENTAL INFRASTRUCTURE ENHANCE THE TRANSMIGRATION PROGRAM

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Abstract: The transmigration program is not just a redistribution of the population between islands but also to sustainably improve the living standard. Implementing population transmigration from East Java to North Kalimantan must be evaluated to enhance solutions to existing problems and increase local social, economic, and environmental needs. The evaluation method is field observation and focus group discussion on 50% of existing transmigrant respondents with an evaluation including nine transmigration program indicators. The results specifically emphasise the encouragement of work productivity in agriculture. Family members influence the welfare of family life. There is a side job when the transmigrants wait for the planting and harvesting season for continuous work and earning income. Understanding the transmigration program to create community economic independence, strong willingness, and hard work. The motivation to participate in the transmigration program is for the sustainability of life. Experience in farming also determines the readiness to work in agriculture, plantations, and related fields. Trading experience is in marketing agricultural foods and products. Practical training for transmigrants is needed to be able to adapt to the new environment in a short time. In conclusion, strategic improvement is necessary for social, economic, and environmental aspects.

Keywords: Environment, migration, productive employment, resilient agriculture, sustainable infrastructure.

Introduction

The transmigration program is one of the efforts taken by the East Java Provincial Government to overcome the problems of population density, poverty, and unemployment in rural areas. Transmigration, one of Indonesia's population programs has been going on for quite a long time (Rustiadi & Junaidi, 2016). Transmigration started during the Dutch colonial era in 1905 with the main objective of reducing population density on Java Island and meeting workers' needs in areas outside Java, mainly for Dutch plantations.

During the Old Order era, in addition to demographic objectives, following Law Number 20 of 1960, transmigration aimed to increase the people's security, prosperity, and welfare and strengthen national unity and integrity. Furthermore, in line with the national development program in the Regional Medium-term Development Plan (RPJMD), development in East Java is prioritised on poverty alleviation to realise the fulfilment of people's basic needs such as the right to food and health services, education, clean water, and sanitation, as well as employment, evenly and fairly. This is because the number of poor people in East Java is still quite high; although, there is a downward trend every year.

Data from the Central Statistics Agency of East Java (BPS, 2022) and consultation recorded that the population of East Java in September 2020, according to the results of the 2020 Population Census was 40.67 million people. The population growth rate from the 2010 to 2020 period is 0.79% per year, an increase compared to the year 2000 to 2010 period, which was 0.76%. East Java is still in the demographic bonus period because 71.65% of the population is still of productive age (15 to 64 years old). The percentage of older people 60 years old and over in East Java increased to 13.1% from 10.4%. The male population is less than the female population, with a sex ratio of 99.60.

Taking into account the Regional Regulation of East Java Province Number 6 of 2013 concerning the Implementation of Transmigration (PDPJT, 2013), the population condition in East Java increasingly shows an imbalance between the population who needs the potential of space resources as a source of livelihood and the possibility of available space resources. Moreover, the conditions are reinforced by the level of development of land conversion, which continues to increase locally (Samudro, 2020), so the imbalance in the population of East Java is a fairly formidable challenge for the Provincial Government.

Meanwhile, the interest of the people of East Java in carrying out mobility to meet their daily needs is quite high. The imbalance between the available space and the population has resulted in the spatial movement of the people of East Java out of the province through transmigration. It is a strategic alternative to improve welfare while facing the problem of increasingly large and complex population pressures. In this context, the roles and responsibilities of the Provincial Government and district/city governments in East Java, where prospective transmigrants live before moving to transmigration areas are important. One of the realisations of the transmigration program in East Java in 2014, as many as 100 heads of families consisting of 311 transmigration souls were dispatched to North Kalimantan. This transmigration placement is an implementation of the collaboration between the East Java Provincial Government, the Bulungan Regency Government, and the North Kalimantan Provincial Government.

This paper evaluates the activities of the East Java-North Kalimantan transmigration program, which has been going on for six years to assess the obstacles and successes of the program. Furthermore, this evaluation aims to improve the program through an effective strategy to motivate existing migrants and simultaneously become a stimulus for new migrants.

Methods

The methodology used refers to socio-economic considerations. In addition to selecting well-developed areas (Gáll & Strežo, 2019), transmigration sites with slow development were also deliberately chosen. This approach was to gain more experience to make further improvements. An agriculture-based work environment was oriented toward increasing crop production and empowering human resources in selected areas (Tan & Mailena, 2021).

The study location was a new transmigrant placement location, previously a non-settlement function. Therefore, this area was given the new name transmigration settlement unit (UPT) Tanjung Buka SP6, located in Bulungan Regency, North Kalimantan Province. This area was inhabited by 100 multi-cultural households (Hs) from East Java regencies, i.e., Trenggalek, Tulungagung, Ngawi, Nganjuk, and Pacitan, as many as 30 Hs, 25 Hs, 10 Hs, 10 Hs, and 25 Hs, respectively. All migrants have lived and worked in the new area since 2004.

This field research consists of field observations and face-to-face group discussions. Field observations covered the transmigrant settlement area and their farming land within UPT Tanjung Buka SP6, where focus group discussions were held. In addition, the scope of field observations was extended to cover other transmigration settlement units and

the transportation network to cities where transmigrants need educational, health, commercial, and related facilities. For focus group discussion, as many as 50% of Hs from each region of origin were taken randomly as respondents in this study. Thus, respondents' perceptions are multi-cultural and represent the population of the new transmigration area. In addition, six years of work was sufficient time to recognise obstacles and gain experience in transmigration life, which can be evaluated for further development.

This study adopted eight indicators of community welfare according to the Central Bureau of Statistics (Rachman & Noviarini, 2018), namely: (1) Income; (2) household consumption or expenditure; (3) condition of residence; (4) residential housing facilities; (5) health of family members; (6) ease of obtaining health services; (7) ease of entering into education; (8) ease of getting transportation facilities. However, considering the new location, one indicator related to the readiness of settlement infrastructure was added.

Following the objectives of this study, all measures of obstacles and successes were measured based on the perception of migrants. As mentioned earlier, they talk freely in focus group discussions within the limits of the indicators of success. Quantitative responses such as monthly income and expenses were estimated based on annual or monthly equivalent kilograms of rice. Currency value was a sensitive subject to be known among respondents in open discussions, apart from not being accustomed to documenting financial balances.

The focus group discussion is divided into five groups, each with 10 respondents. The implementation was at different times when the group had leisure time to relax based on mutual agreement. This method was intended to obtain information close to real conditions with the participation of all respondents and little influence on each other.

Results

Obstacles

The obstacles found and reported here are the problems faced by more than 90% of respondents who agree with their perceptions. The first problem was that the target for land management of 1 hectare per household had not been met, and land clearing had not been carried out by the developer who had been appointed. The consequence was that farming was still limited to the yard and could not increase the productivity of its farming business. On the other hand, the land still requires specialised treatment so that the soil's acidity can be minimised by giving lime which requires separate costs.

The second was land quality problems. The main inhibiting factors are drainage, toxicity, nutrient retention, and the chance of land fires. Drainage in the form of dikes and sluice gates generally requires a moderate to high level of management because constructing drainage channels that can maintain the groundwater level for plant roots requires high technology and high costs. With the current economic condition of migrants, this is difficult to do independently. Until now, most of the business lands owned by migrants do not have dams, water gates, or barriers that meet the technical requirements. The rainy season or high tide will cause flooding, greatly affecting the quality of farming crops.

The third concern was the development of tidal land or peatland. Conversion of land for horticultural crops on a medium and large scale was a very expensive business, and the production cost far exceeded the selling price of its production. Moreover, peatland farming on a small scale without adequate ameliorant and fertilisation will only last a few years as long as the natural fertility remains. Therefore, the productivity of transmigration residents, which has developed at this time has the potential to decline in the next few years.

Fourth, migrants have been unable to optimally cultivate their farming business due to the limited use of technology and production facilities. The main limitations were agricultural equipment such as tractors and production facilities such as fertilisers, superior seeds, pest control drugs, etc. On the other hand, transmigrants lack the knowledge and experience to farm on tidal or peat land. As a result, the productivity of the farm they manage is still not optimal and, in turn, will affect the income level of transmigrants as an important indicator to measure the level of welfare.

Fifth, accessibility between locations was still constrained by the difficulty of obtaining transportation facilities. Problems especially arise during the rainy season because the available road infrastructure becomes muddy, which slows down travel. This condition, in turn, hampered the marketing of transmigrant products and required additional marketing costs.

The sixth was the undeveloped economic institution at UPT Tanjung Buka SP. 6, so transmigrant products were individually marketed. However, the shops operated by this cooperative can only play a role in providing and selling basic needs in limited quantities. Therefore, cooperative shops cannot act as buyers of transmigrant farm produce to be marketed.

Seventh, regarding the utility of settlements. Some residential facilities such as electricity networks and clean water facilities are still limited. Most of them still rely on oil lamps for lighting and TV entertainment purposes, while a small number already use solar energy, which is relatively difficult to reach. Meanwhile, because of the need for clean water, most migrants still rely on rainwater. In contrast, the productive potential of swamp and river water cannot be utilised due to limited technology, equipment, and water purification installations.

The eighth relates to health facilities. Although health services were available at the Auxiliary Health Centre, according to the transmigrants, there was still limited equipment and medicines available. In addition, the frequency of health services for pregnant women and children under five is still restricted to once a month, even though it was expected that it was once a week for transmigration settlements. In addition, the number of visits to doctors once a month was still lacking.

Lastly, education services were adequate at the basic level but were not available for higher education. Therefore, high school children and above had to leave the transmigration location, about 12 km away by using two-wheeled transportation and boats. Thus, transmigrants must pay extra for the vehicle to obtain education services at the upper secondary level.

Successes

Table 1 presents a recapitulation of nine success indicators based on the respondents' perceptions. Perceptions were good, sufficient, adequate, easy, and healthy, scoring 3. Moderate and acceptable perceptions were scored 2. Perceptions of bad, poor, inadequate, difficult, and unhealthy were achieved 1. For 50 respondents, and if all gave the highest perceived response, the maximum success rate was 150. The level of success was calculated based on the score of each indicator per the maximum success rate.

The income of transmigrants comes from two main sources, namely (a) income from farming as their main occupation; and, (b) the results obtained from side work. Side income includes making tempeh, building boats and stalls, tailoring, carpeting, masons, bicycle repair, radio/television repairs, massage therapists, etc. Side jobs as labourers, masons, or woodworkers were generally carried out in the Tanjung Selor subdistrict, about 12 km away, and in another city, Tanjung Selor, about 26 km away. The length of work as a labourer or handyman varies from a week to a month. As long as the head of the transmigrant family worked as a side job labourer, farming, and gardening were carried out by his wife and children.

Expenditures for transmigrant families consist of food and non-food needs. Food

Table 1: The success of the transmigration program at UPT, Tanjung Buka SP.6

No.	Indicators	Total Score	Level of Success (%)
1	Income	112	74.67
2	Expenditure	105	70.00
3	Condition of residence	113	75.33
4	Residential housing facilities	116	77.33
5	The health of family members	116	77.33
6	Ease of obtaining health services	119	79.33
7	Ease of entering into education	117	78.00
8	Ease of getting transportation facilities	118	78.67
9	Settlement infrastructure	113	75.33

expenses include rice, cooking oil, meat, and fish. Meanwhile, non-food costs include transportation, fuel, school children's snacks, clothes, credits, cigarettes, and others, as well as investment in the purchase of durable goods such as furniture, chairs, tables, cabinets, beds, motorcycles, livestock, and others. Not all food needs can be met from the production of transmigrant farming, so they still have to pay to buy rice. Respondents stated that the largest expenditure for food needs was the purchase of rice. In addition, respondents have not been able to meet their needs for a year because the productivity of rice fields is still low, around 0.5 to 1.0 tonnes per year.

The assessment of the condition of the transmigrant house was inseparable from the facilities owned by the respondent's household. They could get clean water facilities from rivers and rainwater. The means of lighting were in the form of solar cells or solar power. Completeness of home furnishings included tables and chairs, cabinets, radio, and television. With more complete facilities according to the needs of migrants, the condition of the house was perceived to be more comfortable.

The government also makes residential facilities and housing for each transmigrant family in the transmigration program. The facilities included roads, bridges, ditches, and other public facilities such as meeting halls, subhealth centres, elementary schools, and the equivalent.

The health status of transmigrant family members can be seen from the level or morbidity rate. During 2020 there were 16 cases of various types of minor illnesses and around 9% of transmigrants were sick, all of which could be handled by the available local health centres. Unless the disease was more serious, the treatment was referred to an adequate health service in another city.

Health services were open every day except Sundays and national holidays. A nurse works daily and a doctor inspects once a month. In addition, health services were equipped with standard medical and non-medical equipment, and medicines were also available according to the standards specified for health services. In addition, there were also family planning services along with contraceptives. The government bore all these health services, so there was no charge for treatment for transmigrants. Especially for the health of pregnant women and children under five, there was an integrated service post with a service frequency of once a month consisting of immunisation services, provision of nutritious food, provision of vitamins, weighing of infants, and examination of pregnant women.

Since most migrants from Java were young families, the most needed basic education was at the elementary school level. However, as

they lived longer, children increasingly needed higher secondary education. Except for private schools, public schools provide education for children free of charge.

For transmigrants at UPT Tanjung Buka SP. 6, a relatively recently opened residential area, the ease of obtaining transportation facilities was very important because it provides access for transmigrants, especially in meeting their daily needs for goods and services, as well as improving their socio-economic life. Meanwhile, to obtain goods and services, side work, health and education services, and other socio-economic services, the UPT exit destinations are Tanjung Palas Tengah district, Tanjung Selor district, and Tanjung Selor city, which are 16 to 26 km apart. So far, to go outside these locations, transmigrants rely on two-wheeled vehicles and boats. However, the ship can only be used at high tide.

Road and bridge infrastructure availability was sufficient at the UPT Tanjung Buka SP. 6. The connecting road to the location and between other bordering villages and the connecting bridge to the river crossing was direct to Tanjung Selor city. This infrastructure was an important requirement for transmigrants in the UPT so that it could facilitate the flow of people, goods, and services directly to Tanjung Selor city. Therefore, all of them affect the respondent's perception of the availability of transportation infrastructure.

Discussions

Assessment

One indicator to see the level of welfare of transmigrants is to analyse the income level of transmigrants, whose data is obtained from transmigrants who are respondents or informants. With the increased income of transmigrants, it is hoped that they will be able to meet their basic needs, thereby increasing the welfare of transmigrants (Haifan & Hendrawan, 2020). However, the income level of transmigrant households is analysed using the magnitude of the expenditure approach of transmigrant families during the last year in kg equivalent to rice (Hukum, 1993). Therefore, the income level of transmigrants at UPT Tanjung Buka SP. 6 cannot be used as the main indicator to assess the level of welfare of transmigrants. In addition, it is strongly influenced by the memory of a transmigrant about what he has obtained for a month, the results of self-consumption of farming products such as rice, corn, tubers, vegetables, fruits, and livestock products, including eggs. All of them are complicated to convert to the value of money as an inherent part of the income in the form of currency values. However, the authors consider that the payment of transmigrants calculated in terms of money is still below the regional minimum wage for Bulungan Regency of 2,439,950 IDR (Disperindagkop Kaltara, 2020). In addition, the nominal income has not been considered in relation to the expenditure of food needs other than the results of their farming business.

For analysing the level of consumption or expenditure of transmigrant households, the assumption is that the higher the income, the lower the spending on basic needs. Meanwhile, the share of cost on non-food needs, including investment in purchasing durable goods will increase. Based on economic law, where transmigrants can already meet the basic needs of life, spending is used more for non-food needs; thus, indicating an increase in the welfare of the transmigrant concerned (Haifan & Hendrawan, 2020). If it is related to the income level, it means that in real terms, most of the income of migrants has been able to meet food and non-food needs. Thus, judging from the income level indicator, it can be stated that the welfare level of migrants from East Java at UPT Tanjung Buka SP. 6 is quite good.

The perception of migrants about the housing facilities currently owned shows that the assessment of the house's condition is improving. Especially the habit of placing plants in the house, which follows the agricultural work environment, contributes to maintaining the quality of the home environment (Miletto & Lindow, 2015; Jiayu *et al.*, 2019; Samudro

& Mangkoedihardjo, 2021; Samudro *et al.*, 2022a). Therefore, most migrants think that the house they currently live in is adequate for a decent life.

The perception of transmigrants about the available settlement facilities is sufficient. With adequate housing facilities availability, transmigrants' mobility will be smoother. Including the availability of roads that are quite adequate for two-wheeled vehicles that can be reached in a quick 45 minutes to 1 hour from the location of UPT Tanjung Buka SP. 6. From the indicators of settlement facilities, the welfare level of the transmigrants from East Java is quite good. Housing facilities are a basic need and ease of transportation contributes to local economic growth (Thondoo *et al.*, 2020).

By paying attention to the data on the types of illnesses suffered by transmigrant family members, they are generally mild diseases. Therefore, they can be handled by the local community health centre. In general, it can be said that the health status of transmigrants is quite good. Paramedical services and regular doctor inspections support the result. Apart from housing, health facilities are an important basic need (Kruk *et al.*, 2018) to carry out work and life activities for all workers and their families.

Education plays a very important role as a key factor in improving the quality of human resources, even though investment in education takes a long time to feel or see the benefits and impacts. In the context of transmigration, the focus of the evaluation of education indicators is transmigrant children. The higher the level of welfare of the migrants, the easier it will be to enrol their children at all levels of education. In less than five years, the need for an education level above elementary school becomes urgent for its provision, both in transmigrant locations and nearby cities. The model of early childhood education in Central Java such as nature school (Fauzi & Novikasari, 2020) can be applied to transmigrant communities and provide equal learning opportunities throughout the region.

Transportation supports community economic activities and regional development, especially in rural and remote areas. The existing transit is intended to improve the mobility of the population and other resources that can support economic growth in the area (Thondoo *et al.*, 2020). Transportation also opens up opportunities for trade activities between regions and reduces differences between neighbourhoods, thereby encouraging development between regions. The assessment of transmigrants follows these needs. Therefore, transportation infrastructure, roads, and bridges are needed to access migrants, especially in meeting their daily needs for goods and services and improving socio-economic life.

Improvement Strategy

Following the problems faced by the transmigrants of UPT Tanjung Buka SP. 6, in addition to the success obtained, it is agreed that there is a need for anticipatory efforts to improve the transmigration program. The paradigm is that existing migrants improve their welfare independently based on the spirit of community participation (Sampurno, 2023). The transmigrant community's participation strength allows socio-economic-environmental conditions to attract potential new transmigrants. The following are key strategies that can significantly achieve a realistic mindset.

Land clearing for farming needs to be carried out in line with residential land following the provisions of the 5-year development period by the developer. After that, the coaching is managed by the Regency Governments to monitor and evaluate regional development. Construction of drainage infrastructure and barriers along with their floodgates that meet the technical requirements for business land is an urgent need that needs to be realised by the developer immediately. Expecting transmigrants' ability to do it independently is ineffective and incompetent. In certain cases, intervention from the government is needed, especially concerning

the assistance of heavy equipment to dismantle the tree roots that are still left in quite a lot. In addition, the use of heavy equipment in land clearing concerns work safety, which is only carried out by competent and trained officers as stipulated by the Minister of Manpower and Transmigration (Menakertrans, 2010).

The transmigrants' income and welfare levels are also strongly influenced by the farming commodities managed by the transmigrants. The more varied or diversified the farming commodities that are addressed, the higher the level of income obtained. On the other hand, a single farming commodity will potentially harm transmigrants; for example, if there is a crop failure due to various factors. Based on the spirit, as mentioned earlier, of participation, the managerial capability of budgeting (Rifai *et al.*, 2022) for multiple commodities can improve income for the entire transmigrant community.

Horticultural crop cultivation is a leading commodity in transmigrant farming and has promising business prospects. However, technically, production requires a reduction in soil acidity levels and adequate fertilisation, which is economically expensive (Shoghi Kalkhoran *et al.*, 2019). So far, the transmigrants have not been able to do it optimally due to the limited economic capacity of transmigrants. It has not affected the soil fertility and therefore has not affected the level of productivity; this cannot be allowed to continue for long. Thus, technically good amelioration and fertilisation are urgently needed. In addition, agricultural production facilities include seeds, seedlings, animal feed, fertilisers, drugs to eradicate plant-disturbing organisms, fuel, farming tools, machinery, and agricultural production equipment (Sims & Kienzle, 2017). Agricultural tools such as hoes, tripe machetes, sickles, pest sprayers, and tractors are used to cultivate land and crops. Fertiliser is also necessary for plant growth because it will help the growth process. Pesticides are used to eradicate pests and plant diseases. Especially for the land amelioration process, a large amount of lime is needed. In addition, superior seeds, hybrids, and those that have undergone genetic modification are also required to adapt to certain types and conditions of the land.

Besides the marketing problems of transmigrant farming products, developing economic institutions as transmigrant business partners is necessary. Farming cooperatives can overcome the marketing of agricultural products (Agbo *et al.*, 2015; Ahmed & Mesfin, 2017; Anania *et al.*, 2020). Such cooperation must mutually require, strengthen, and benefit all parties.

Improvement of location accessibility facilitates the flow of people and goods (Baraklianos *et al.*, 2018) to and from transmigrant settlements so that the problem of marketing the production of transmigrant farming products does not encounter significant obstacles. Completing road infrastructure at the transmigration location of UPT Tanjung Buka SP. 6 in the form of concrete or paving needs to be done immediately. Government intervention is necessary because the development requires no small amount of money.

Lighting facilities in the form of electricity networks and clean water supply are also an urgent need for transmigrants at UPT Tanjung Buka SP. 6, considering that these facilities greatly affect the quality of life of transmigrants. The solar energy used by some migrants in other locations has also been used. However, it is economically less efficient because it is expensive and requires intensive care. Meanwhile, using rainwater to meet the need for clean water is only suitable for bathing and washing, while drinking water is not suitable for health. Therefore, efforts should be made to provide renewable energy (Morris & Bowen, 2020), lighting facilities through the electricity network and swamp or river water purification installations for clean water.

Anticipatively, it is necessary to improve health services for migrants. The main thing is to improve the quality of services and the frequency of health services, especially for pregnant women and children under five (Edoka

et al., 2016), in the form of examinations and provision of additional food to improve nutrition and counselling. In addition, the frequency of doctor visits also needs to be increased to bring services closer to the community.

Education at a higher level than elementary school in the next few years will become an urgent need. Furthermore, to support farming, it is necessary to focus on vocational education in agriculture and related fields (Martin & Kitchel, 2020) such as fisheries and food technology for agricultural products.

There needs to be practical education on solutions to environmental problems. Three compartments of the field are required, which include the treatment of ecological resources (Hidayat, 2016), prevention of environmental pollution (Sarfraz *et al.*, 2016; H. Samudro *et al.*, 2022b), and restoration of polluted environments (Samudro & Mangkoedihardjo, 2020). All of these are needed considering that migrants come from multi-cultural Javanese, who must adapt to a new environment that is different physically, socially, and economically. Training outside the transmigration program has benefits and influences the abilities, skills, and knowledge of transmigrants outside the main activity of farming. With the power, expertise, and learning outside the farming field, they have the opportunity and potential to diversify their business. Through business diversification, it is hoped that migrants can increase their income (Allen, 2016).

Land ownership status in the area of origin is a different experience that can affect the performance of migrants in a new place (Sumarja *et al.*, 2017). Moreover, all migrants get land with ownership status with an area of two hectares. Their land ownership status will be a different motivation for transmigrants to work more enthusiastically because the results will be obtained from the full rights of transmigrants. This strategy can stimulate prospective migrants on the island of Java to take part in the transmigration program outside Java.

All of the improvement strategies are supported legally following Article 20, paragraphs (1) and (2) of the Regional Regulation of East Java Province Number 6 of 2013 (PDPJT, 2013). The Provincial Government must provide post-placement guidance covering government institutions' economic, socio-cultural, and mental-spiritual development and the residential environment. Furthermore, in paragraph (4), within a maximum period of five years after the placement of the transmigrants, the guidance shall be submitted to the local and regional governments.

Conclusions

Based on the perception of more than 90% of existing transmigrants, crucial obstacles are the unfinished land clearing process, difficulty in constructing drainage or dams along with water gates, the potential for decreasing soil fertility of transmigrant farming land, suboptimal management of transmigrant farming land, accessibility between transmigrant locations, absence of electricity network and the provision of clean water, the lack of intensive medical services, and the unavailability of secondary schools. Despite the obstacles, it was recorded and evaluated that there was a success rate of around 76% on the nine success indicators of the transmigration program. However, the consensus of perception indicates the need for strategic improvement on the constraints. The purpose is to maintain the motivation of migrants and become an attraction for new candidates. Therefore, the recommendations are addressed to the coordination step between local management officials in North Kalimantan Province to implement further development.

The important conclusion is that land clearing is not ready for agricultural work, coupled with insufficient infrastructure to support agriculture. With these problems, new migrants must wait to start working in agriculture and obtain crop products. Therefore, the technical recommendation is to prepare ready-to-use land before the arrival of the migrants.

The main limitation of the new migrants is that they have not received the preconditions in their area of origin to become workers based on agriculture and post-harvest businesses across the island. In addition to agricultural work that has been mastered, several important training programs relate to post-harvest businesses, especially the processing of raw materials into materials that can be further developed into processed products that consumers need. With post-harvest business skills, new migrants can always have jobs without a break over the season. Therefore, a further recommendation for the training program is addressed, which involves the local government of the transmigrant's origin and the new destination's local government.

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Conflict of Interest Statement

The authors declare that they have no conflict of interest.

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