Transborder Movements of Borderland People in Indonesia – Papua New Guinea (Case Study: Iwur District, Pegunungan Bintang Regency)

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Abstract. The border area between Indonesia and Papua New Guinea (PNG) is mostly defined based on geographic coordinates without considering cultural boundaries, which has resulted in high intensity of interaction and trans-border movements in the area. Trans-border movements in the border area of Indonesia and PNG, specifically in Pegunungan Bintang Regency border area, are classified as illegal movements. This is due to lack of border area facilities to accommodate these movements. There are varieties of purposes of trans-border movements in this area, which are classified into 4 categories. They are economic purposes, cultural purposes, social purposes, and political purposes. Circular or temporary movement is a trans-border movement category based on the maximum of 6 months of stay in the destination country. There are three factors that influence the borderlanders on conducting trans-border movements, namely individual characteristics factors, social-economy factors, and cultural factors. The movements are mostly conducted for economic purposes in addition to the influence of individual characteristics factors.

Keywords: border area, transborder movement

1. Introduction

Borderland is an ‘arena’ for trans-border crimes which also represents dynamic history in cultural and socio-economic exchange between two countries at the same time [1]. According to [2], trans-border agreement between two countries represents unity of borderland people in socio-economic and socio-cultural aspects.

Although borderlines are drawn precisely on maps and both countries have a bilateral treaty, in fact, the practice is quite different. No matter how many customs officials are placed in border area, how clear the borders are agreed, and how many watchtowers are built, people will ignore borderline whenever it suits them [3].

According to [4], migration is one of the borderland problems between Indonesia and Papua New Guinea (PNG). Understanding determinants and processes of trans-border movements in migration is needed for the development of the borderland area. The civilians’ responsiveness to the different situation and condition of both countries causes the migration to occur. There are many factors which cause the existence of both legal and illegal trans-border movements between Papua and PNG [5].

Trans-border movements also exist in Pegunungan Bintang Regency. Pegunungan Bintang Regency belongs to Papua Province, consisting of 34 districts and 8 of them are adjacent to PNG. According to [5], Papuan of both Indonesia and Papua New Guinea shared the common traditions and habits. They had a good relationship with one another before the concept of country and constitution was applied. Since then, nationalism and security level in the borderland have been diminished.
Cultural factor such as Ulayat land and administrative boundary between the tribes of Pegunungan Bintang Regency and Papua New Guinea, social factor e.g. family, economic factor e.g. trade, and security factor like separatism and limited security in the borderland, have a huge impact on the movements in the Pegunungan Bintang Regency borderland. Trans-border movements in Pegunungan Bintang Regency are mostly illegally conducted, which are dominated by social-cultural activities like visiting families, marriage, hunting, and traditional ceremonies as well as economic activities like farming, shopping, and trading.

Related study on trans-border movements in borderland is needed, especially for those that happen in Pegunungan Bintang Regency in order to sustain the persistence of borderland in Pegunungan Bintang Regency as the exit-entry point.

2. Research Method

This research employs quantitative method. Quantitative research is one of the scientific research types which is systematic both in terms of its parts and relationship among them by using mathematical model [6]. This type of research uses measurable data and objective statistics data.

Unit of analysis is used as a unit of research object. Unit of observation is a source from unit of analysis and it is a part of unit of analysis which is used to draw a conclusion. Unit of analysis and unit of observation that are used in this research are:

1. Unit of analysis: people who live in the borderland between Indonesia and Papua New Guinea.
2. Unit of observation: people in the borderland (whose citizenships are of Indonesian and Papua New Guinea) that lived in Iwur District during the research (in 2016).

2.1. Data Collection

This research used primary and secondary data collections methods. Primary data was obtained through direct observations; it is in the form of raw data. The primary data collection was divided into three methods; interview, questionnaire, and direct observation. Interviews were given to concerned parties like headmen and security officers i.e. Army, while questionnaires were given to the civilians belonged to the unit of observation. In the other hand, observation was aimed to identify the condition of facilities and infrastructures in the field of research.

2.2. Sampling

According to [7], sample is a part of population. The sampling technique used in this research is purposive technique with sample of people aged 15 and above because trans-border movements were mostly performed by people who are in their productive age, 15-64 years old [8]. The data from interviews and questionnaires was generalized to estimate the condition of population. This research used [9] sampling method to determine the interview sample size. Based on the result of sample calculation, the sample consisted of 208 people.

2.3. Identification of Trans-border Movement in Borderland

The identification of trans-border movements in the borderland was done by decrypting the data from questionnaires and interviews. Then, the data was described using descriptive statistics. This identification was aimed to find out the purpose, frequency, and type of movements, along with the living period in the destination country and how long the movements were performed.

2.4. Binary Logistic Regression Analysis

Regression analysis is an analysis to predict the impacts of independent variables toward the value of dependent variable. In this research, the dependent variable is dichotomy variable which shows someone’s decision to do a trans-border movement. Thus, binary logistic regression analysis is used in this research. Whereas, the independent variables were divided into three factors, namely individual characteristic factor, social-economic factor, and cultural factor.
3. Results and Discussion

3.1. Types of Determining the Borderland in Indonesia – PNG

There are two types of determining the borderland in Papua Island, which is divided into two zones (Indonesia and Papua New Guinea). They are:

1. Natural Border, (the deepest point of Fly River) exists between Boven Digoel regency and Merauke regency in Papua as well as the Western Province zone in PNG.
2. Artificial Border, consists of border stakes built along the island following the astronomical line on 141º 01’00”BT from the north Papua to the south on the natural border, which then continued to the south passed the meridian on 141 º 01’ 10” BT.

Although the demarcation of Indonesia-PNG boundary between Indonesia and PNG has been arranged and has come to a decision that the borderline of Papua-PNG is +820 Km restricted by 52 border pillars, according to BNPP data on 2015, the borderland between Papua-PNG is not optimal and unfinished. Due to the landlords’ ownership problem of tribes in borderland, determining the borderline of country, especially Papua-PNG needs further consolidation with tribes living at the borderlines.

The major problem on the long borderline is the difficulty of both countries in doing maintenance of the border stakes. One of the efforts to maintain the Papua-PNG border stakes was done by Indonesia by the end of 2016. Through this operation, Digi village, which administratively belongs to Indonesia but subjected to PNG government, was discovered.

Ever since, borderland people were classified into two categories, transnational borderlanders or respondents who performed trans-border movements in 2016, and national borderlanders or those who did not perform trans-border movements in 2016.

In conclusion, the societies who are categorized as trans-national borderlanders are more than the national borderlanders. The result of this survey showed that society in the borderland of Indonesia – PNG, especially in Iwur District had an intense relationship with the society in the other side country. Approximately, 30% PNG civilians are female (transients), who became national borderlanders as they did not do any trans-border movements in 2016 and had also been resided in Indonesia for more than 6 months. The reason for this is that those people had married to the natives whose citizenship of Indonesian and live in Iwur District.

Iwur District is adjacent to 3 districts and 2 districts in PNG. Based on the result of the interview, Iwur District has 11 villages, but only 10 villages are registered in Pegunungan Bintang Regency.

3.2. Transborder Movements in Iwur Borderland

3.2.1. Characteristic of movement lane

Based on the survey results, there are three preferred routes from Iwur District to PNG or vice versa. They are Marantikin village in Tarub District (on the east of Iwur District), Ok Tedi track (one of the mining area in PNG), and the last is a track passed by people of Digi village.

3.2.2. Respondent Characteristics

Based on the interview results, trans-border movements were commonly performed by a group of 3 to 10 people who came from several families. All of the movements were done without passing the border posts. People usually walked from one village to another through several lanes. From the research samples of 204 people, 123 people are the doers of trans-border movements. Those samples consisted of 138 Indonesians and 66 PNG people. The movements were frequently performed by males, either Indonesian or PNG.

All respondents of the interview live in Iwur District. According to the education level, most of the residents are uneducated. According to the occupation, 172 respondents are farmer, 21 respondents are housewives, 1 respondent is a priest, 1 respondent is a nurse, 3 respondents are state civil apparatus (ASN), and 6 respondents are unemployed. Based on the survey results, 30 respondents that consist of 20 Indonesians and 10 PNG are OSEA members who did trans-border movements.
3.2.3. Trans-border Movements Characteristics.
During 2016, 123 respondents had done 451 trans-border movements. Depending on their length of stay, the movements are divided into two, migration and circular [10], while according to the purpose, they are classified into 4 [11], which are:
1. Economic purpose. It consists of three purposes, namely shopping, trading, and farming.
2. Social purpose. It consists of two purposes, namely visiting families and getting facilities of public services such as health and education.
3. Cultural purpose. It consists of three purposes, namely marriage, hunting, and traditional ceremony.
4. Political purpose, which is organization activity.
Farming and shopping which belong to economic purpose have the greatest impact on the trans-border movements in Iwur District borderland, while political purpose like organization activity has the least. Movements with the purpose of farming were mostly done in the harvest season, whereas movements for shopping were mostly done approaching the religious feast days such as Easter, Christmas, New Year, as well as the harvest season. Trans-border movements were generally temporary, i.e. 1 to 30 days. The permanent movements consisted of 6 movements. The journey variously lasted for 3 days to a week. Most of the respondents did trans-border movements for 10 to 12 days. Beside the purpose and duration of the movements, the movement frequency was also one of the factors being studied. The amount of trans-border movements done in 2016 was more than 8 times. In general, the doers were those who moved 3 up to 4 times within a year.

3.3. Analysing the Factors Affecting Borderland Interaction using Binary Logistic Regression Analysis

1. The factors affecting borderland interactions in Iwur District border were analysed using binary logistic regression with dummy variables. It aimed to identify the factors that affected the trans-border movements in Pegunungan Bintang Regency, particularly in Iwur District. Here are dependent and independent variables used in binary logistic regression with dummy variables.

- Y = 0, do not perform any migration
- = 1, perform migration
- JK1 = 1, if the respondent is male
- = 0, if the respondent is female
- Age = age of the respondent (years old)
- SP1 = 1, if the respondent is married
- = 0, if the respondent is not married
- PT1 = 1, if the respondent is uneducated
- = 0, if others
- KO1 = 1, if the respondent is a part of organization
- = 0, if the respondent is not a part of organization
- KW1 = 1, if the respondent is Indonesian
- = 0, if the respondent is Papua New Guinean
- Income = the respondent’s average income per month
- P1 = 1, if the respondent is employed
- = 0, if the respondent is unemployed
- TU1 = 1, if the respondent possesses a customary land in other countries
- = 0, if the respondent does not possess a customary land in other countries
- AS1 = 1, if the respondent comes from Murop tribe
- = 0, if others
- KA1 = 1, if the respondent participates in communalism
- = 0, if the respondent does not participate incommunalism
3.4 Logistic Regression Similarity

Based on the results of analysis using SPSS 23, the similarity model formed is as the following:

\[
\pi(x) = \frac{\exp(5.222 - 0.103 \text{Usia Responden} + 2.074 \text{Kewarganegaraan} + 0.207 \text{Status Pekerjaan} - 0.820 \text{mengikuti adat})}{1 + \exp(5.222 - 0.103 \text{Usia Responden} + 2.074 \text{Kewarganegaraan} + 0.207 \text{Status Pekerjaan} - 0.820 \text{mengikuti adat})}
\]

The use of the obtained model was simulated for the people (the samples) that did the movements and those who did not. Those who moved were simulated using dummy variable code 1 on each independent variable or on the annotated variable:
1. The respondent is at the age of 25
2. The respondent is an Indonesian
3. The respondent has an occupation
4. The respondent has desire for communalism

The motionless samples were simulated using dummy variable code of 0 on each independent variable or on the annotated variable:
1. The respondent is at the age of 68
2. The respondent is a PNG citizen
3. The respondent has an occupation
4. The respondent has desire for communalism

The calculation results for the simulation were 0.984 for the samples who did the movements and 0.069 for those who did not. The prediction results between code 0 (not doing trans-border movements) and code 1 (doing trans-border movements) are limited to 0.5 (cut value 0.5). If the result is more than 0.5 so, that samples are categorized as performing trans-border movements, while if it is less than 0.5 so, that samples are categorized as not performing trans-border movements.

4. Conclusion

According to the results and discussion, there are 6 conclusions that can be drawn, which are:

1. Based on the interview with people who live in borderland of Pegunungan Bintang Regency, it was found that 60% of the people are Transnational Borderlanders and 40% of them are National Borderlanders. It showed that the borderlanders of Indonesia – PNG, especially those in Iwur District bond with the people of the adjacent country. To conclude, Iwur District as a private location whose function as an exit-entry point, is expected to accommodate the activities of trans-border movements.
2. Based on the survey results, there were three preferred routes from Iwur District to PNG or the other way around. Those are Marantikin village in Tarub District (on the east of Iwur District), Ok Tedi track (one of the mining area in PNG), and the last is the track passed by people of Digi village. The route selection depended on the proximity of the exit-entry point and the destination.
3. Based on the interview results, trans-border movements were commonly performed by a group of 3 to 10 people that came from several families. All of the movements were done without passing the trans-border posts. People usually walked from one village to another through several lanes for 3 days to a week.
4. Most respondents are farmers at the age of 30-34 and residents at the age of 35-39. Economic purpose like farming and shopping greatly drove trans-border movements. Most movements for farming were in the harvest season, while for shopping were close to religious feast days such as Easter, Christmas, New Year, and in the harvest season.
5. The amount of trans-border movements done by borderland people in Iwur District in 2016 is 8 times. It was dominated by people who moved 3 up to 4 times a year.
6. Based on the previous researches, there were 12 variables that drove people to do trans-border movements, namely gender, age, marital status, occupation, citizenship, educational level, separatist membership, income, customary landlord status in the adjacent country, tribe and communalism. Based on these results of regression analysis, there are 4 variables that significantly affect the movements (B value< Sig. 0.05). Those variables are age, citizenship, occupation, and communalism.
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