



State Borders as Center of Economic Growth: Case Study of the East Arso District in the Indonesia – Papua New Guinea Border

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ABSTRACT

This article aims to pinpoint the East Arso District's existing economic conditions and identify factors contributing to devising the region as the center of economic growth in the Indonesia–Papua New Guinea (PNG) border. Data were collected through focus group discussion, observation, and a literature review conducted between October and November 2021. By using a qualitative approach, this study found that the East Arso District offers the potential to be developed as the center of economic growth in the Indonesia–PNG border. The region community's commodities are considered including agriculture, forestry, fisheries, and livestock goods. The scope of the study also examines the condition of PNG's neighboring communities in Sandaun Province, road infrastructure, and cross-border and security. This article proposes a model of economic development for the East Arso District: the establishment of Transnational Border Posts (PLBN), border market, road infrastructure, a multi-purpose cooperative society and improvement of access to commodities, education, and health. Additionally, the plans to create the East Arso district the center of economic growth are also

expected to strengthen ties and cooperation between Indonesia and PNG, which, in turn, can prevent misunderstanding and conflict in the future.

KEYWORDS

Border; East Arso; Indonesia; Keerom; PNG

INTRODUCTION

The borders of Indonesia have often been considered backyard and underdeveloped by previous governments. However, this paradigm profoundly changed under the leadership of President Joko Widodo (Jokowi), which echoed the national border area as a front line of Indonesia for national defense and encouraged its development to foster the community's economy. The story of borders also remained a priority for President Jokowi to put into action its strategic programs, called 'Nawacita' (the 3rd point): "Building Indonesia from the periphery by strengthening regions and villages within the framework of a unitary state" (Hermawan, 2019, p. 67). Since being elected as President in 2014, Jokowi has proven his seriousness by building eighteen Transnational Border Posts (PLBN/ *Pos Lintas Batas Negara*) in several adjacent provinces of Papua New Guinea (PNG). Several PLBNs have been inaugurated, whilst others remain under construction.

According to the Law of the Republic of Indonesia Number 43 of 2008 about Country Territory, article 1(6): "The Border Region is part of the State Territory

located on the inner side of Indonesia's borders with other countries; in terms of the boundary of the territory of the country on land, the border region is in the district." In this regard, it could be argued that President Jokowi not only examines borders as a form of affirmation of sovereignty and territorial borders (security approach) but also an area offering the potential to improve people's well-being (welfare approach). The seriousness of the Jokowi government on border development can also be seen with the issuance of Presidential Instruction Number 1 of 2021 concerning the Acceleration of Economic Development in State Border Areas in Aruk, Motaain, and Skouw. Indonesia has land borders with three countries: Malaysia, Timor Leste, and PNG.

At the Indonesia-PNG border, five regions in Papua Province have direct land borders: Jayapura City, Keerom Regency, Pegunungan Bintang Regency, Boven Digoel Regency, and Merauke Regency. The boundary between the Province of Papua (Indonesia) and PNG is quite unique because most of the 750 km stretch from North to South is still covered with forest. Perhaps it is because the island of New Guinea is home to the

third-largest rainforest in the world after the Amazon and Congo (Norotouw, 2017; WWF, 2020). As the largest province in Indonesia, Papua also provides natural mineral potential to the country. PT Freeport Indonesia is one of the world's leading mining companies in Mimika regency. Yet, the future mining potential in Papua is undeniable, given that state-owned miner PT Aneka Tambang (Antam) has also explored the Wabu Block gold mine in the Intan Jaya regency (Amnesty International, 2022). Ironically, these mining resources have not been utilized optimally for the community, placing Papua one of Indonesia's poorest regions (BPS, 2021). The slow development in Papua has also been linked with the huge political and historical context of Papua in Indonesia (see Blades, 2020; Druce, 2020; Widjojo et al., 2010), including the protracted conflict, human rights abuses, marginalization, and discrimination.

To determine the policy direction and strategy for developing national border areas, the Ministry of National Development Planning/Bappenas has selected several priority locations in the 2020-2024 – where Keerom Regency is one of the targets which will be intervened in the Fiscal Year 2023 (Presentasi Bappenas, 2021). The border development in Keerom regency will focus on some districts only, including East Arso. Hence, the East Arso District's initiative to pilot the economic growth in the Indonesia-PNG border area aligns with the national program. The project is expected to increase the Gross

Regional Domestic Product (GRDP) and Regional Original Income (PAD) of the Keerom Regency in the coming years. Keerom Regency has eleven districts, and this article will focus on East Arso District.

This article selects East Arso District as a case study based on three considerations. Firstly, this area is exceptionally fertile for agricultural land. The village of Kibay, for instance, is not only famous for planting and cultivating vanilla plants but also providing plant seeds for other villages even outside the East Arso District. People in this district also grow other economically valuable crops such as areca nut, corn, cloves, etc (Santoso, 2020; Observation, 2021). Secondly, the East Arso District offers many potentials, such as fisheries, local tourist destinations, rice, and oil palm agro-tourism (Presentasi Bappenas, 2021). These circumstances then place East Arso superior in terms of regional potential to other districts directly bordering PNG's neighboring countries such as Waris, Senggi, Web, and Towe. Lastly, the East Arso District has a very strategic position. Apart from having three villages (Kibay, Skofro, and Sangke) directly adjacent to PNG, this district is also close to the capital city of Keerom Regency and Jayapura City (see Figure 3) to accelerate connectivity between regions.

It is worth noting that reliable data regarding natural resources and other potentials in the East Arso District is rare to be found, not to mention security conditions, road infrastructure, socio-cultural conditions in the neighboring

country, and other aspects. It is, therefore, necessary to conduct pre-assessments in research studies related to economic development in the national border area, East Arso District to be exact, which is objective and representative. Most importantly, devising this district as one of the economic growth centers in the RI-PNG border area is crucial. This research is expected to be a pilot study in order to stimulate other studies which are more in-depth and more specific.

This article strives to pinpoint the East Arso District's existing economic conditions and identify factors contributing to devising the region as the center of economic growth in the Indonesia-Papua New Guinea Border. It will contribute to the development of international relations study in two aspects. First, it will add to the existing literature on international borders, given the results of this study could be a preliminary study for a future, full-scale project. Second, it will be the nexus of how the economic-oriented welfare approach can go hand in hand with the security approach in the sense of state borders. The article is structured as follows. The first section reviews the existing literature about developing an economic-based state border area in the provinces adjacent to neighboring countries (Malaysia, Timor Leste, and PNG), followed by explaining the methodology used in this study. The following section describes the results, discusses the findings, and summarises the main findings.

LITERATURE REVIEW

The development of an economic-based state border area is not something new. Indeed, several Indonesian provinces with neighboring countries: Malaysia, Timor Leste, and Papua New Guinea have implemented border economics though some challenges are faced, as described below.

On the border of Indonesia and Malaysia, Edyanto (2007) contends that developing an economic development zone should focus on three vital aspects. The first is the welfare approach, based on economic activities to enhance the border community's welfare. The second is the environmental approach, considering ecological sustainability and minimizing the impact of development activities. The third is the security approach, which views the border as an area directly adjacent to other countries, thus maintaining the security integrity of the Republic of Indonesia is mandatory. On the border of Kalimantan (RI) and Malaysia, 10 (ten) Economic Development Zones have been established.

On the other hand, Sunarya and Sudaryono (2016) also conducted research in the sub-district of Entikong in West Kalimantan Province (RI) and Sarawak (Malaysia). They found that even though the government has changed its border approach from security to welfare, it does not significantly improve the community's well-being. Many issues have been along with the border areas, including land and sea problems. Sunarya and Sudaryono (2016) came up with the

recommendations for the Indonesian government to improve the policy, economic and socio-cultural, defense and security, natural resources management, institutional and management authority, and cooperation inter nations. Likewise, Sanak (2012) who also identified border management between Indonesia and Malaysia found that community welfare was still low. Sanak later came up with the recommendation to strengthen human security as a strategy to address the issue.

From the Malaysian perspective, Anuar and Harun (2019) affirmed that the terrorist threat at the Malaysian border remains high, particularly in Sabah. That occurred because the region is directly adjacent to Indonesia (and the Philippines). In this regard, cross-border criminals consider Sabah a transit point to carry out their illegal activities. This security threat then has implications for the reduced economic activity of the people at the border. Therefore, Anuar and Harun (2019) suggested that the government balance the objectives of the security and development interests so that people can conduct community economic activities for their livelihood.

Moving on to the border of Indonesia and Timor Leste, Keraf and Pramono (2019) argued that the state should plan economic development carefully. They proposed four things for advancing border areas. First, the government should consider the demarcation of the state boundary to endorse the development. Second, the types of economic activities fostering the

development of border areas should also be supported. Third, improving infrastructure in border areas such as roads, bridges, other facilities, and infrastructure is vital to support community activities. Fourth, activities within the PLBN (Transnational Cross Borders) related to CIQS (Custom, Immigration, Quarantine, Security) need to be tightened.

Ma'rif (2012) scrutinized that economic development on the border of Indonesia and Timor Leste remains slow due to the centralistic development pattern and the old paradigm of the border area, viewing the border as a state security belt. Accordingly, Ma'rif emphasized that the economic development of border areas must prioritize sustainability aspects, such as developing alternative livelihoods access to capital, technology, and markets. The alternative livelihoods are not only in agriculture, such as processing, marketing, or cultivation, but they should also consider non-agricultural activities. Access to capital is also critical because the community finds it difficult to obtain money; thereby, offering a self-financing mechanism is vital. Meanwhile, access to technology is carried out through technological improvements, starting from production technology to post-production, because the technology used by society, in general, is still traditional. Finally, the market is a pull factor and can be a significant constraint if the market does not develop. Therefore, the way to

establish a business is to open market access.

Meanwhile, economic development in the border of Indonesia and PNG remains focused on areas that already have a PLBN and border markets: Skouw and Sota. According to Sasongko et al., (2018), Skouw Jayapura is the only border area within the administration of the provincial capital, making it different from the borders of other regions in Indonesia. Hence, the location is strategically developed as a trade area between the two countries. This condition is also supported by the existence of the Skouw border market in Jayapura City—the center for the distribution of goods and services between the people of Indonesia and PNG (Maryen et al., 2021); not to mention it is a place to visit for local people and from outside the city of Jayapura. The Skouw market is one of the targets in Presidential Instruction Number 1 of 2021 concerning the Acceleration of Economic Development in National Border Areas.

After inaugurating PLBN in October 2021, Sota Merauke is also projected to become the center of economic growth center in Papua. As stated by the Minister of Home Affairs Tito Karnavian, “The presence of the Sota PLBN is the beginning of the area’s development as a new center of economic growth on the national border, which would benefit Papua, neighboring PNG, as well as other Pacific countries” (Imandiar, 2021). The PLBN Sota is regarded as a trade route for border communities because of the

activities of border crossers from Weam District, Western Province, PNG, around 350 people per month. The dominant items purchased from the Sota PLBN Market in the last eight months are daily necessities, agricultural products, plantations, and food crops. Of course, it can be an opportunity for local businesses and entrepreneurs to play a role in providing the needs of approximately 201,351 residents of Western Province PNG. In addition, Merauke Regency is also the largest rice producer in Papua, being a national food barn or a national food-producing center. In 2020, Merauke Regency exported 15 thousand tons of rice to Daru, the capital city of Western Province, through the Torasi Port (Edyatama, 2021).

As one of the five regions bordering PNG, Keerom Regency has also been considered by the central government to explore its economic potential. Indeed, President Jokowi has expressed his initiative to see Keerom being a food estate (corn barn). Therefore, in November 2021, the Regent of Keerom, Piter Gusbager, and young farmers who are members of the Inspirational Papua Young of Keerom Regency carried out the first corn planting to support Keerom to become a national corn barn (Nugroho, 2021). It would indirectly affect economic development in all areas in Keerom Regency, including the East Arso District, which has a direct border with neighboring PNG. The coronation of Keerom as a national corn granary is expected to increase the value of other

commodities simultaneously to meet national needs, as well as export to neighboring PNG. Apart from the potential of corn crops, East Arso District also has another potential to enable the region to become the center of economic growth within state borders. In this study, the center of economic growth refers to the area having the potential to be developed (East Arso District) to benefit communities and states by identifying existing local commodities and supporting the infrastructures. Paulus et al. (2019), in their research on the Belu regency bordering Timor Leste, show that farming and livestock businesses there play a pivotal role in supplying national needs as well as for neighboring Timor Leste. Similarly, in their research, Prasetyo et al. (2013) indicate that infrastructure development carries considerable implications for boosting economic growth within Indonesia's land borders. Economic infrastructure includes roads, bridges, and airports, while social infrastructures are education and health. Next, this article will explain the research methods.

METHODS

This article employs descriptive qualitative research. According to Silverman (2016, p. 3), "qualitative research is the type of research procedure that finds out about people's experiences. It helps understand what is important for people". This paper also analyzes data from direct fieldwork observations, open-ended interviews, and written documents

(Patton, 2005). Ibrahim et al. (2018) argue that a qualitative approach can be used if the purpose is to reveal a situation or an object in its context; grasp the meaning or in-depth understanding of a problem at hand, which appears in the form of qualitative data, either in the form of pictures, words, or events as well as in a 'natural setting.' This research took place in East Arso District, Keerom Regency, Papua Province.

Data were collected through Focus Group Discussion (FGD), observation, and literature study. The FGDs were conducted twice: 1) with the local government working unit (SKPD) of Keerom Regency in the fourth week of October 2021, and 2) with the community representatives from nine villages in East Arso District in the first week of November 2021. About 50 people (men and women) participated in the FGD with the government located in the office of Bappeda Keerom; they were divided into several categories/ groups: borders, forestry, agriculture, infrastructure, and economy. The FGD with community representatives consisted of 15 participants (men and women) situated in the village of Pikere. Observations of the conditions of the social, economic, border, and potential commodities in three villages bordering PNG: Kibay, Skofro, and Sangke were carried out in the second week of November 2021. A literature review is also conducted to collect secondary sources to support primary data, emanating from statistic data (BPS/

Badan Pusat Statistik), journal articles, books, reports, and web pages on the

internet. The logical framework in this study is as follows:

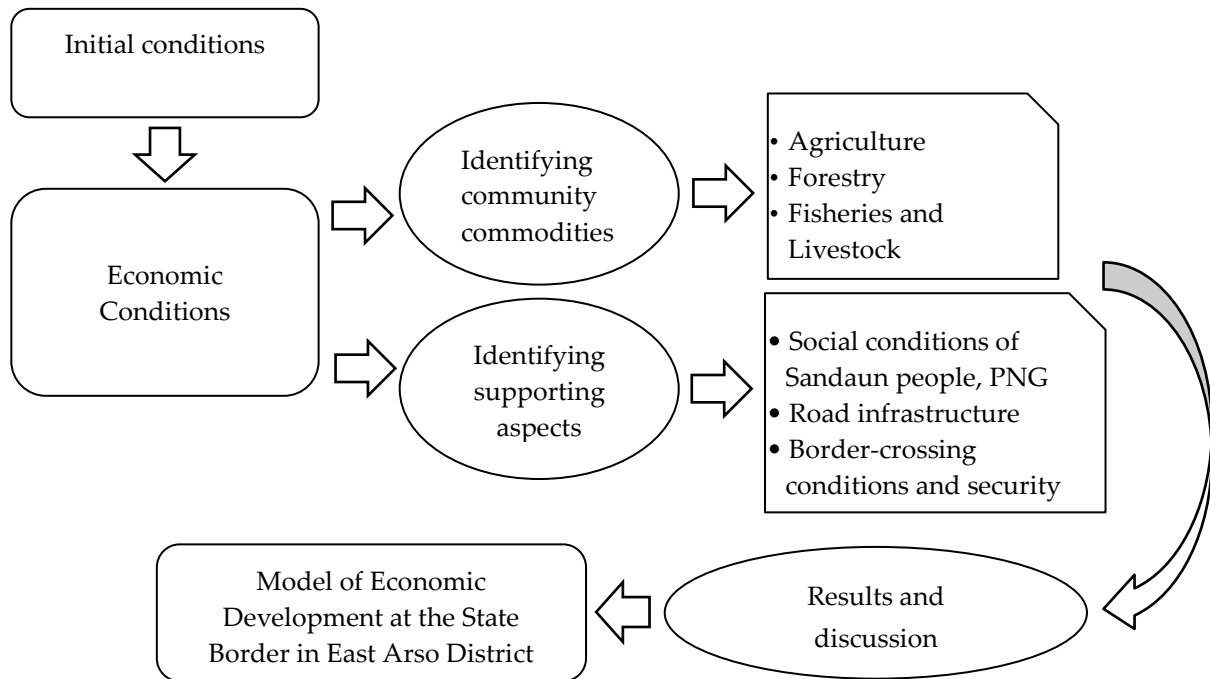


Figure 1. The logical framework for creating the center of economic growth in East Arso District, Indonesia-PNG border. *Source:* drawn by the authors (2021)

RESULTS AND DISCUSSION

East Arso District Profile

To the north, East Arso District borders Jayapura City; to the south, it borders the Waris and Senggi districts; to the west, it connects the Mannem district; to the east, it borders PNG (BPS Distrik Arso Timur, 2021). This district has nine villages: Kibay, Yetty, Pikere, Suskun, Pitewi, Kriku, Skofro, Amyu and Sangke. Only three villages are directly adjacent to neighboring PNG (See Figure 2/ red circle). The district capital is in Yetty's village. Skofro Village has the most expansive area of 79.96 km², or 23.51% of

the total area of the East Arso district (BPS Distrik Arso Timur, 2021). Ethnically, the nine villages are divided into two major parts: *Kampung asli* (native village) and *kampung campuran* (mixed village). The native village is occupied by indigenous Papuans, while the mixed ones are a combination of indigenous Papuans and non-Papuans. The native village consisted of five villages: Skofro, Kibay, Sangke, Kriku and Yetty. Meanwhile, the mixed village consists of four villages: Suskun, Pitewi, Amyu and Pikere (FGD Dengan Masyarakat Arso Timur, 2021).

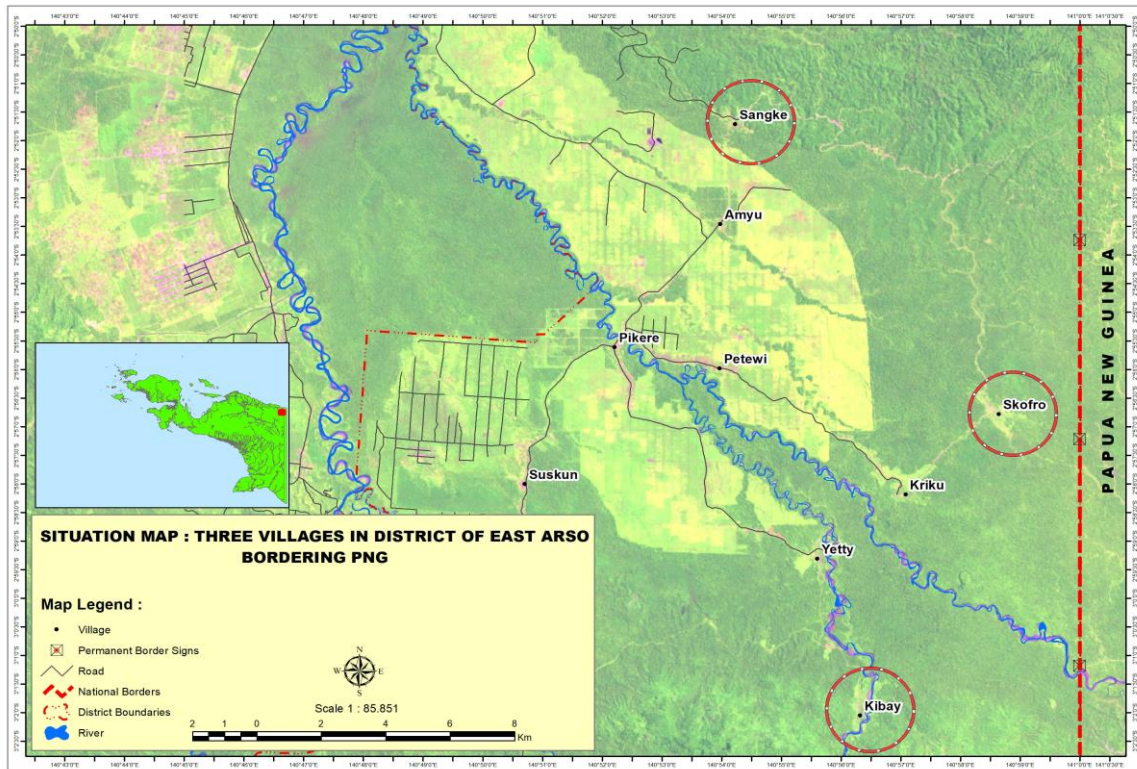


Figure 2. Situation Map: Three Villages in East Arso District bordering PNG

Source: drawn by the authors (2021)



Figure 3. An overview of the East Arso district's distance to Arso city and Jayapura city compared to other districts (Waris, Senggi, Web). Source: drawn by the authors (2021)

Sangke village has the furthest distance from the district capital (Yetty), 21.6 km². If going on foot, it can take about 4 hours 14 minutes. Meanwhile, Yetty is the closest village to the district capital, which is 3.9 km², and if taken on foot, it would take about 47 minutes. During 2019, the East Arso district had moderate rainfall. The highest rainfall occurred in March of 508 mm³ with 17 rainy days. In contrast, the lowest rainfall is in December, 67 mm³, with six rainy days. The sea level's average altitude (village) in the East Arso district is around 0 – 1000 m. Suskun is the highest village, while Kriku is the lowest (BPS Distrik Arso Timur, 2021).

The government should also pay attention to educational infrastructure in the East Arso district, especially the provision of physical education facilities for teachers and an adequate number of schools. Overall, only Yetty village offers elementary school, junior high school, and high school, while the other eight villages only have an elementary school. There are 48 elementary school teachers with 510 students, 17 junior high school teachers with 147 students, 6 high school teachers with 33 students. This number covers public and private schools in the East Arso District (BPS Distrik Arso Timur, 2021).

In the health sector, the East Arso district has one main health center located in the village of Pitewi, 5 auxiliary health services located in the villages of Yetty, Kibay, Suskun, Pikere, and Pitewi. Meanwhile, the number of health workers

in the East Arso district is 20 people, consisting of two doctors, nine nurses, eight midwives, and one person from the Pharmacy section (BPS Distrik Arso Timur, 2021).

Identifying Economic Conditions in East Arso District, Keerom Regency

Based on the Keerom Statistics (2021), the economic growth rate during the last three years generally experienced a slowdown. In 2019, the economic growth of the Keerom faced a deceleration compared to the previous year. In 2018, the agricultural, forestry, and fisheries business fields and construction still remained the main drivers of the growth rate as the previous year. Thus, the plan to devise East Arso District a pilot for the economic growth in the Indonesia-PNG border area may contribute to accelerating economic growth in Keerom Regency in the coming years.

Meanwhile, the Gross Regional Domestic Product (*Produk Domestik Regional Bruto*/ PDRB) of Keerom Regency per capita experienced an increasing trend from year to year, along with the increase in the total added value of economic sectors. Until 2019, the value of the district's per capita PDRB has reached more than 50.00 million rupiahs, an increase of 3.26 percent from 2018, which was 48.42 million rupiahs. This value has increased by 26.64 percent from the previous five years (2015), worth 39.48 million rupiahs (Keerom Statistics, 2021).

While the Keerom Regency provides the overview of PDRB, the East Arso

district does not offer that data. PDRB plays a vital role as a measure of development performance, especially in the economic field of a region in a certain period. Although District's PDRB is not yet available, this study attempts to briefly describe two approaches that can affect the PDRB of the East Arso District. The first approach is the working population. Based on statistics data from East Arso District, the total population is 3163, consisting of 1729 male residents and 1434 female residents. Meanwhile, the productive age population (15-64) is 1788 (M: 1001 and F: 787). This data does not specify how many people have worked, yet it provides the productive age range above 50, which helps increase the

district's economy (BPS Distrik Arso Timur, 2021).

The second approach is household consumption. Like other districts in Keerom Regency, the people of East Arso have not followed the pattern of spending in developed countries where spending on non-food groups is more than food expenditure. Non-food expenditures include housing needs such as lighting and water, agricultural requirements (seeds and fertilizers), taxi and motorcycle taxi rental services, while food expenditures generally include prepared food and beverages, vegetables, betel nut, and others. An overview of the economic sectors in East Arso District can be seen in the following table, where the agricultural sector is the most dominant.

Table 1. Number of Households by Economic Sector in East Arso District

Villages	Economic Sector				Total
	Agriculture	Trading	Industry	Service	
(1)	(2)	(3)	(4)	(5)	(6)
Yetty	20	4	-	1	25
Kriku	18	1	-	-	19
Kibay	42	3	-	1	46
Sangke	33	1	-	0	34
Skofro	39	1	-	0	40
Suskun	40	3	-	2	45
Pikere	14	3	-	1	18
Pitewi	15	1	-	-	16
Amyu	11	-	-	-	11
Total	232	17	-	5	254

Source: BPS Distrik Arso Timur (2019)

The FGD with the community showed that they experienced problems accessing the marketing of commodity

products for several reasons: 1) there was no central market in East Arso; 2) the utilization of shophouse building facilities

that has not been effective. The community manages the shophouse building facilities in Pikere village as a place to rent if traders desire to sell their wares. Trading activities in these places do not run regularly, only active at certain times when oil palm employees receive wages/ salaries; 3) the distance from East Arso district to the market area outside the district is very long and expensive, and the access road is damaged.

By acknowledging the local wisdom of the region's geographical and socio-cultural conditions, each border area indeed has its approach based on local conditions. In the economic development of East Arso District, this article identified two vital aspects: 1) community commodities: including agriculture, forestry, fisheries, and livestock; 2)

supporting aspects: including the condition of PNG's neighboring communities in Sandaun province, road infrastructure, and cross-border and security conditions.

Identifying Community Commodities

First of all is the agriculture. Agricultural commodities have various types of products in their development. They can be processed and utilized into food, beverage, or craft products with high economic value. Some of the products from agricultural commodities are sold in raw conditions, semi-finished materials (which have gone through post-harvest handling), and final products. Data related to horticultural, food and other plantation commodities in the East Arso district can be seen in the table below.

Table 2. Horticultural, Food and Plantation Commodities in East Arso District

No	Commodities	Types of plants
1.	Horticulture	Cayenne pepper, red chili, tomatoes, cabbage, long beans, spinach, mustard greens, water spinach, and eggplant.
2.	Food	Corn, peanuts, taro, sago, and sweet potatoes.
3.	Plantation	Palm oil, vanilla, robusta coffee (under development), and cocoa

Source: FGD with SKPD of Keerom Regency and the East Arso Community (2021)

In addition, the people in East Arso still found it difficult to provide superior plant seeds (betel nut, vanilla, and coffee), fertilizers, pesticides, agricultural tools, and good plant cultivation practices. They, therefore, require assistance from the government in providing seeds, fertilizers, pesticides, farming tools, and

intense help from agricultural extension workers. The marketing pattern of farm commodities in the East Arso district is that farmers sell their harvests directly to collectors. The things are then cleaned, sorted, and distributed according to collectors' consumer orders. Not many farmers are willing to sell their crops to

the market. That occurred because of the long distance from their gardens and the poor condition of the road infrastructure. Most of the derivative products from the East Arso district agricultural commodities are not well developed. Most farmers sell their agricultural products in a raw/fresh state.

Furthermore, the Forestry sector also plays a pivotal role in developing the new economy in the national border area, particularly East Arso District. The FGD with the Keerom Regency Government and the community, as well as the observation, identified several potential forest products (timber and non-timber) that can enhance the community's economy in East Arso District. Timber Forest Products include Merbau, Lingua, Matoa, and other woods. Non-Timber Forest Products include agarwood, cryptocarya massoia bark, orchids, edible-nest swiftlet, honey, and rattan.

The forestry potential in the East Arso district, primarily found in the villages of Kibay and Sangke. Meanwhile, the villages of Skofro, Kriku, and Yetty have non-forestry potential. This potential certainly offers good prospects to generate economic value for the local community in the years to come, not to mention the area, where forestry potential covers about 38,909.20 Ha and non-forestry potential is approximately 20,744.83 Ha. In addition, the community also stated that there was no assistance from the Government, especially related agencies, in developing the potential of Timber and NTFPs to

improve the welfare of the village community in the East Arso district. Therefore, the Government should take this into account and assist the community in developing the potential of NTFPs.

Other sectors which can be developed in the East Arso district are inland fisheries and livestock farming. The FGD with the community described types of fish cultivated in several villages, including catfish, goldfish, and tilapia. Based on observations, the village of Pikere has made a pond with a permanent structure in every house. However, the problems they faced were regarding the procurement of fish seeds and feed. The authorities should therefore train the communities to make a feed from natural resources (biomass) that they can produce themselves. Indeed, biomass produced from several agricultural commodities such as corn cobs and cassava flour can be used as a mixture for fish feed.

In farming, livestock cultivated in the East Arso district include cows, pigs, chickens, swallows, and goats. However, the number of animal seeds owned by the community remains few and limited. Thus the government should also facilitate training for the community on how to raise livestock correctly and adequately to obtain satisfactory results. Most of the effects of fish farming carried out by the community in the East Arso district are for consumption as a fulfillment of family nutrition. Next, this article will examine

supporting aspects related to economic development in East Arso District.

Identifying Supporting Aspects

The condition of neighbor PNG is the first supporting aspect identified in this article. Apart from being adjacent to Jayapura City, PNG's Sandaun Province (West Sepik) also borders Keerom Regency (See Figure 4). The FGD with the community recorded that the people of PNG living in the Sandaun area are still influenced by traditional lifestyles. It means that they believe in their ancestors' customs and way of life, not to be affected by modern life. They garden and grow traditional foods such as sweet potato, taro, bananas, cassava, gedi leaves, wax vegetables, and other vegetables for household consumption and sale. Their way of gardening is still based on traditional methods as well. The fertilizers used for planting all come from natural fertilizers.

The Sandaun people tend not to have the same knowledge of modern gardening as the farmers in Jayapura. That occurred because they consider Indonesian farmers in Jayapura using fertilizers (modern farming methods) that contain many chemicals that can damage their health. For that reason, they prefer to use traditional gardening methods that their ancestors have passed from generation to generation to stay healthy and avoid diseases. The Sandaun community is also reluctant to import vegetables from Jayapura because many have visited Indonesia and seen firsthand the way of farming in Jayapura, which

uses a lot of chemical fertilizers. Hence, they still choose to consume vegetables or other garden foods that they grow traditionally. For the people of Sandaun (PNG), the custom is precious, thus the community must maintain them for future generations.

According to the rules, if visiting Jayapura City or Keerom Regency, the Sandaun people living in border areas should use a yellow Traditional border card (TBC). Yet, some do not use TBC and follow the unofficial routes, called '*jalan tikus*'. Perhaps it is because Keerom Regency does not yet have a PLBN (Transnational Border Posts). In contrast, Jayapura City already has a PLBN Skouw as an official crossing route. The social interaction of the RI-PNG community also covers many things, including family relationships. Indeed, their family relationship is very tight because some people of East Arso used to study at Vanimo and even married PNG people. In addition, the status of customary land is also interesting to explore. It happened because long before Australia and Indonesia determined the demarcation line in 1973, the residents in these two regions had interacted as a social entity. Therefore, it is not surprising that some people in PNG now own customary lands in East Arso, and vice versa, East Arso people own ancestral lands in PNG.

The last exciting thing to explore is marijuana smuggling activity. Although marijuana is illegal in PNG, local people widely grow it, especially teenagers. They extend for consumption, and some are

sold in Sandaun province itself or to other parts of PNG. Because Sandaun borders Papua province by land and sea, marijuana is also sold to Jayapura and other districts in Papua through unofficial routes, unknown by security forces at the

border. Cannabis has a very high selling price, making many young PNG involved in the illegal trade. Marijuana users even refer to the plant as 'New Guinea Gold.' The results from the sale of cannabis are primarily used for spree lifestyle.



Figure 4. Situation Map: The Keerom Regency – Sandaun Province Border
 Source: drawn by the authors (2021)

The PNG government itself is not firm enough to deal with marijuana users and dealers, making many young generations in PNG consume marijuana to excess. Although the Jayapura city (Indonesia) and the Wewak city (PNG) cooperate to prevent marijuana and drug distribution under a sister city (Imigrasi Jayapura, 2019), they still struggle to optimize their work due to many unofficial routes and the lack of border

officers. Some even end up having brain disorders. In the city of Vanimo, many stolen motorbikes came from Jayapura and Keerom. The East Arso is one of the transit places to conduct marijuana transactions with stolen motorbikes. Overall, this condition at least reflects the situation in PNG's neighboring country in Sandaun Province, which can indirectly affect the economic activities of the people

in the East Arso district in the way they interact with the neighbors.

The next is the condition of the road infrastructure in the East Arso District. To make East Arso one of the centers of economic growth in the Indonesia-PNG border area, requires support from various sectors, including road infrastructure. It is vital to support connectivity between villages and attract visitors outside the Arso Timur District or the Keerom District. The distance between villages in East Arso District quite varies between each other. According to observations, the road infrastructure connecting nine East Arso remains poor because of many damaged, rocky, and unpaved roads. There is only a tiny part of the roughly paved road while most of the road is unpaved. This unpaved road condition certainly reduces the community's mobility and indirectly has an impact on the slow economic growth in the East Arso District. Currently, the primary means of transportation used in East Arso is a motorcycle taxi or '*ojek*'. The number of motorcycle taxi bases in East Arso district is three, with around 20 motorcycle service providers (BPS Distrik Arso Timur, 2019).

Last but not least is border-crossing conditions and security. With a relative near position, cross-border activities of the people of East Arso District to PNG and vice versa have become a part of everyday life. However, there is a concern from the community of East Arso regarding traditional cross-border activities. Indeed, they oppose people from PNG entering

Indonesia freely with marijuana, weapons, smuggling cocoa, vanilla, or other sinister intentions.

So far, the cross-border posts built by the Papuan provincial government only exist in Skofro village and not on a large scale like the PLBN Skouw. However, as of the writing of this study, the post has not yet been inaugurated. According to the rules, people should arrange a red traditional border card (TBC) to cross into PNG. Yet, most people do not use TBC and choose to walk through the footpath or unofficial routes the community has made. The FGD with the Keerom government also noted that the community could cross the border by reporting to the tribal chief or the head of the RW/RT or army guard post. The East Arso District has proposed the creation of a cross-border card (red card) to control the entry and exit of people from PNG to Indonesia and vice versa but still waiting for the authorities.

The community also expects that there will be increased security in the border area of East Arso with PNG, especially in the three villages directly adjacent to PNG due to the frequent occurrence of crimes, as previously mentioned. For example, in Skofro, security is deficient at the border so that children can freely transact marijuana. The FGD with the community recorded that the indigenous people of East Arso initially did not know about marijuana. Apparently, the people from the outside influence the local community so that many young people are now consuming

marijuana. They even do not know about the effects of marijuana on health either.

Proposing Model of Economic Development in the Borders

Developing border areas as the economic growth centers is undoubtedly a noble idea that deserves appreciation. This idea is vital because the lives of border communities are still below the poverty line and are left behind in various aspects of life. The development of the economic sector is expected to spur the growth of other sectors, improving the welfare of border communities. From the results

presented earlier, we can draw a hypothesis that the East Arso district has the potential to be developed as a center of economic growth in the Indonesia-PNG borders, yet creating a new economy in the border areas requires great efforts and cooperation from various stakeholders. This article acknowledges that the local wisdom of each border area will affect the development of economic conditions in the region. In advancing East Arso as a the economic center in the Indonesia-PNG border area, this article underlines several vital aspects as illustrated in the figure below:

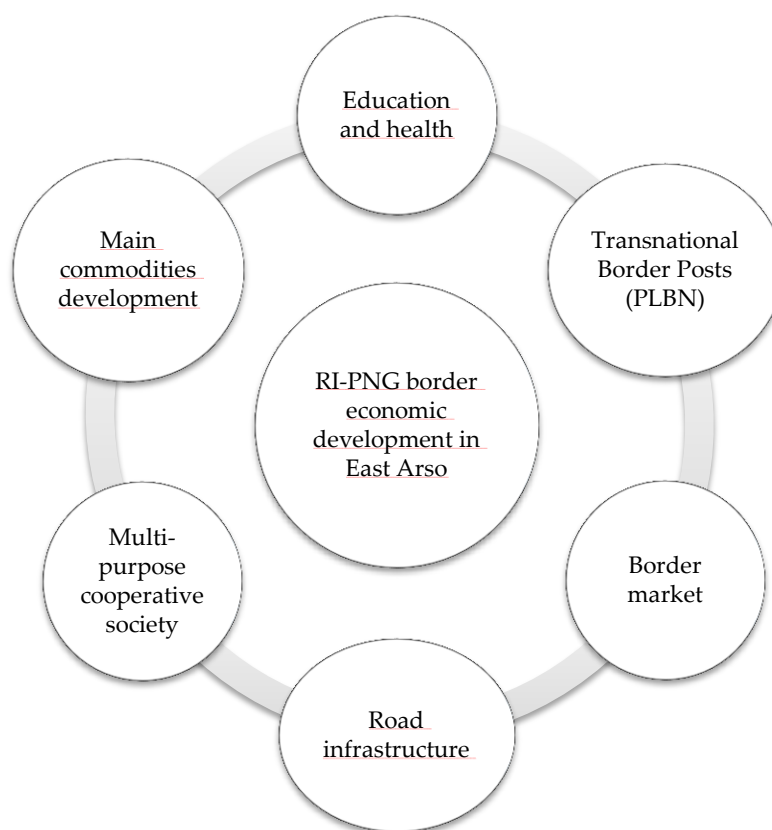


Figure 5. Model of Economic Development in the Indonesia-PNG Borders in East Arso District. *Source:* drawn by the authors (2021)

First of all, the availability of cross-border posts that cover Customs, Immigration Quarantine, Security (CIQS) like PLBN (Transnational Border Posts) in the East Arso district. A PLBN is crucial to ensure the safety of people and goods from and out of Indonesian territory through the East Arso District. PLBN is also an official crossing to minimize illegal border crossers. In addition, a PLBN offers the potential to become a new tourist attraction in East Arso which can improve the region's economy. Of the three villages in East Arso directly adjacent to PNG, this article recommends Skofro Village to be prepared for establishing a PLBN with three considerations: 1) Skofro Village has the most expansive area, which is 23.51% of the total area of East Arso District. Hence, it is ideal for the development of PLBN. 2) Skofro village has a strategic position between two other villages (Kibay and Sangke) in East Arso, which also borders PNG. 3) The distance from the capital city of Keerom Regency (Arso) to Skofro Village is very affordable, about 70 km² (BPS Distrik Arso Timur, 2021).

The following aspect is constructing a border market located in East Arso, which is directly adjacent to PNG. As with the development of other border areas in Indonesia, the border market plays a vital role as a supporting infrastructure for PLBN and an instrument to accommodate local farmers' commodities and other traded commodities for sale. This border market will undoubtedly be a unique attraction for PNG residents who live

along the Saundaun Province area to come shopping in Indonesian territory, making East Arso the center of economic growth in the Indonesia-PNG border area. The government can build a border market in Skofro Village with the same considerations as the PLBN.

In addition to the border market and PLBN, it is also crucial to provide adequate road infrastructure in East Arso. As previously explained, East Arso's road is not yet paved and rocky; thus, it needs repair. Paving the road is essential to support connectivity between villages in East Arso, access out of East Arso district to the capital city of Keerom Regency, and connectivity with other areas. Road infrastructure is also critical to stimulate people outside Keerom district to visit East Arso District.

The fourth aspect is reactivating a multi-purpose cooperative society in East Arso District. Cooperatives are required as the basis of economic strength and resilience to improve the community's quality of life. In the context of the economic development in the Indonesia-PNG border area, cooperatives can collect production carried out individually by residents. It is also essential to change the population's mindset that cooperatives are not only for capital assistance but rather the responsibility to change the capital as a productive instrument.

Next is the need for regular assistance to local farmers in the context of developing main commodities, such as vanilla and corn, and other prospects such as fisheries, local tourist destinations, rice,

and oil palm agrotourism. The government can realize this by providing seeds, fertilizers, livestock seeds, fish seeds, feed, etc. Assistance can be focused on cultivation techniques, handling of commodity products, and product processing to produce good products with added value and sustainability. It will undoubtedly support the livelihoods of the people of the East Arso District and fortify the concept of creating the center of economic growth in the national border area.

Although this study does not focus on education and health, these two aspects also need to be improved to support the Arso Timur district as the basis for the economic development in the Indonesia-PNG border area. A good education will improve one's intellectual abilities and trigger critical thinking. For example, if children in border areas have a good education, of course, they will not be tempted and involved in smuggling activities. Similar to health, the community in East Arso needs adequate health facilities to support their daily activities. If people are healthy, they can do their activities, including economic activity.

Most importantly, the economic development model proposed above is expected to strengthen the bilateral relations between Indonesia and PNG. Undeniably, the two countries relations have had ups and downs due to armed conflict in Papua Province; thus, fostering economic cooperation would be great. The border market, for example, will play a

pivotal role in providing goods and services for citizens of both countries. In the field of international relations, liberals consider strengthening bonds between states in some areas would lead to greater cooperation in other fields (Tanious, 2019). These ties should enhance communication and prevent misunderstanding, which creates tension and conflict between them. From this standpoint, we expect the proposed economic development model from the Indonesian side (the East Arso District) will improve the way the two countries perceive one another, which, in turn, reduces the possibility of conflict in the future.

CONCLUSION

This article has examined a case study of the East Arso District to become the center of economic growth in the Indonesia-PNG border area. Creating an economic growth in the border area is not an easy matter. It requires identifying existing community commodities as livelihoods and looking at other supporting aspects. The heterogeneity of the East Arso District residents, which consists of native and mixed villages, should become local wisdom and strength in developing the area. Improving the community's economy requires the support and cooperation of various stakeholders, from the district level to provincial and central government. It is also possible to involve the private sector in collaborating in the economic development of border communities under their scope of work.

In this context, President Jokowi's work program to "Build Indonesia from the periphery" is a cornerstone that can encourage the development of national border areas and create the center for economic growth, including in the East Arso District. Indeed, this article found that the East Arso offers the potential to be developed as a center of economic growth in the Indonesia-PNG borders. The economic development in East Arso District is expected to be a pilot project that can be replicated in other border areas in Papua, yet upholding the local wisdom of each region. The economic development of East Arso indeed cannot be separated from the community commodities, such as agriculture, forestry, fisheries, and livestock, as well as supporting aspects like the condition of PNG's neighboring communities in Sandaun province, road infrastructure, and cross-border and security. Those characteristics are interrelated in supporting economic growth in East Arso, yet they have some weaknesses. Hence, after evaluating the drawbacks, this article came up with six elements for advancing East Arso as the center of economic growth in the Indonesia-PNG borders: Transnational Border Posts (PLBN), border market, road infrastructure, multi-purpose cooperative society, main commodities development, education, and health.

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