

# Identifying Social and Economic Interaction through its Periphery in Lhokseumawe, Indonesia

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As a municipal area Lhokseumawe, Indonesia, is placed strategically, in the middle of Banda Aceh and Medan Cities. It is flanked by several districts namely Central Aceh, Bener Meriah, Bireuen, and North Aceh. Lhokseumawe City has numerous potential aspects, such as agriculture and infrastructure but it does not optimise their use. This necessitates study of interactions with its surrounding trade and industry (periphery), because Lhokseumawe City is core in that activity. The purpose of this study is to identify its social and economic interaction with its periphery. This qualitative research was conducted using a literature review, books, journals, documents and other data sources including limited surveys. The analysis categorises Lhokseumawe as a medium city, due to its strategic location and availability of economic infrastructure, and also because of its being the core of its peripheral trade and industry.

**Key words:** *Social and economic interaction, periphery, urban areas, potential agricultural and infrastructure.*

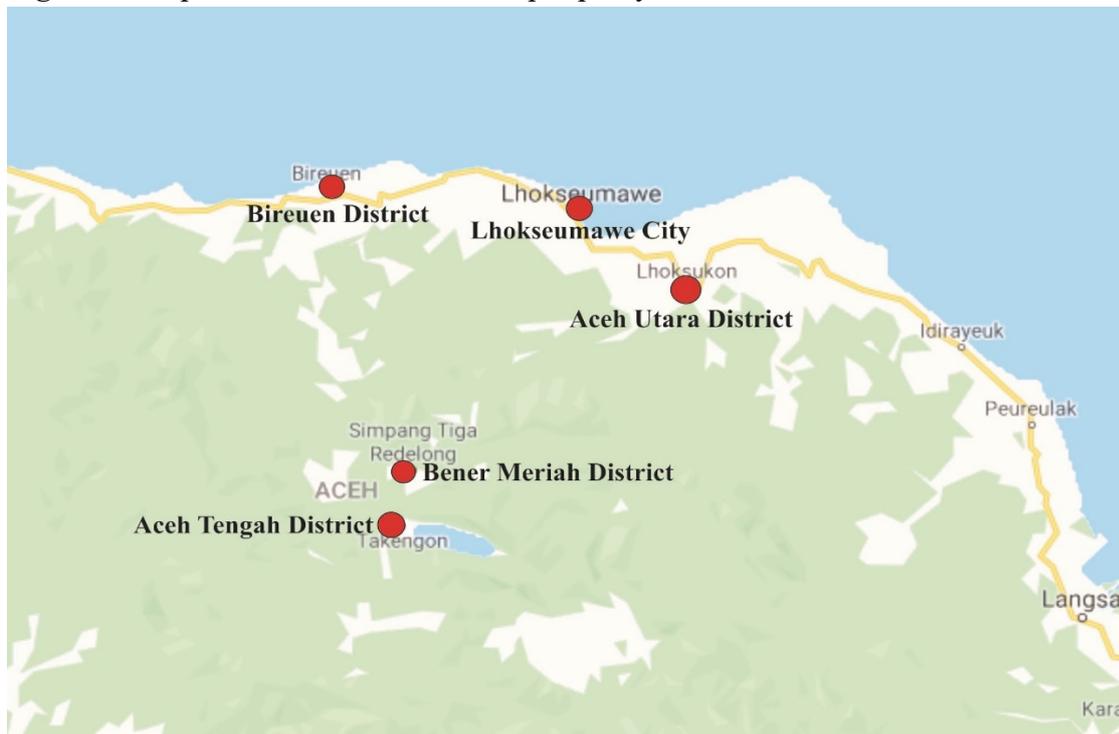
## Introduction

Lhokseumawe City is a physical town. Yet it is also an urban area that has an atmosphere of modern life and livelihood; it can be called a metropolitan area. The geography of a city is not merely an essential consideration when beginning to determine a location. Instead it also

affects its function and physicality. The founders of the original town of Lhokseumawe intended to develop commercial marine activities in their settlements, as a place of exchange of goods between the mainland and the sea. In contrast, the cities of the world are diverse and there are both sparse and dense populations. Cities experience life with different socio-political, religious and cultural conditions which have several external elements that stand out, and therefore affect towns' development. One problem in Indonesia's big cities is high urbanisation. Rapid population growth can indicate this increase. It has implications for increasing workforce numbers as the beginning of the process of urbanisation.

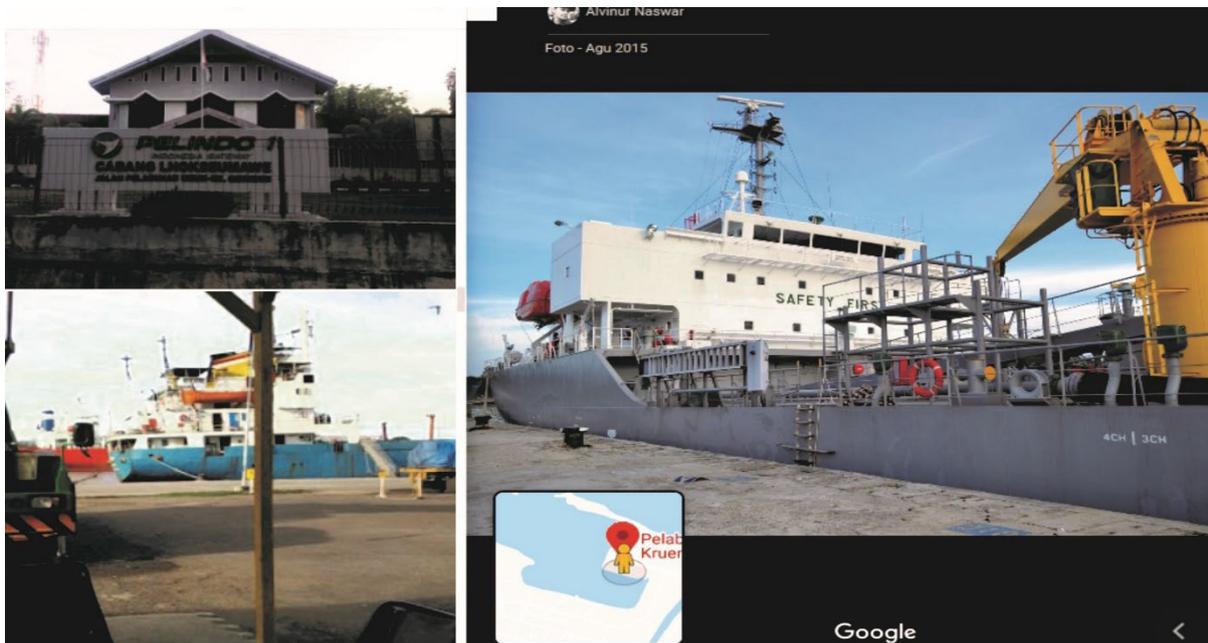
Lhokseumawe is one of the Aceh cities that are strategically located between the cities of Banda Aceh and Medan in North Sumatra. The city is divided administratively into 4 (four) sub-districts, namely Banda Sakti, Muara Dua, Blang Mangat, and Muara Satu. Geographically, the city is at 04°54' - 05°18' north latitude and 96 ° 20 ' - 97 ° 21' east longitude, flanked by the Malacca Strait, has an area of 181.10km<sup>2</sup>, with its northern border being the Malacca Strait, and the North Aceh district to the south, west, and east (Central Statistics Agency of the Lhokseumawe City, 2018). The city of Lhokseumawe is also close to the areas of Aceh Tengah, Bener Meriah and Bireuen districts which have potential for agricultural products. Apart from being the centre of government and education, the city is also the centre of the economy and its trade. In 2018, there were 775 goods and services companies. In addition to large companies, micro and small-scale traders appear to be colouring economic life, in a rapidly growing trade for most people in Lhokseumawe.

**Figure 1.** Map of Lhokseumawe and its periphery



Lhokseumawe City has a strategic location (as shown Figure 1). Its region can be core for the economy on the northern coast of Aceh, with the potential for export and import of agricultural products from other producing areas. These other areas include Aceh Tengah district and Bener Meriah district which provide coffee. As well, Bireuen district and North Aceh district produce cacao and other potential goods, because Lhokseumawe City has sufficient sea port facilities, and airport infrastructure which offers an airway entrance (as shown Figure 2 and Figure 3).

**Figure 2.** Harbour facilities in Lhokseumawe



**Figure 3.** Facilities of Malikussaleh Airport in Lhokseumawe



### The City Potential as the Core for Periphery Areas

The city can play a role as a core for peripheral regions. The city has some potential in terms of location, availability of economic infrastructure and economic regulation. To ascertain this potential, a city must be classified by function and population, to determine its status. Based on its dominant function, Sastrawan (2010) divided Lhokseumawe City severally, into: (i) a city of culture, with more dominant cultural potential than other potential areas; (ii) a city of commerce, a city that functions as a trade hub, usually a port city; (iii) industrial cities, industrial activities in these cities are more dominant than other businesses; (iv) the city as a city of government which can grow rapidly because of its administrative role. Moreover, Lhokseumawe City has extensive relations with other cities such as recreational and health cities, which can attract newcomers. Finally, other cities are predominantly active in education because there are various quality and well-known schools or colleges. Further, Iwannafre, (2014) differentiated cities according to their populations: (i) megapolitan, cities with populations greater than 5,000,000 people; (ii) metropolitan, cities with populations of between 1,000,000 - 5,000,000 people; (iii) big cities, with populations between 500,000 - 1,000,000 people; and (iv) medium cities, with populations between 100,000 - 500,000 people. Small towns are cities with populations between 20,000 - 100,000 people.

### ***Potential Agricultural Commodities with Periphery Areas***

The periphery of Lhokseumawe is a hinterland consisting of sub-districts, settlements, and villages. The potential periphery comprises Bener Meriah district, Aceh Tengah district, Bireuen district, and North Aceh district. Each region has potential as a producing region that conducts trade transactions both locally, nationally and internationally in the city of Lhokseumawe. Bener Meriah District is very fertile. It is suitable for the development of all types of plants, such as horticultural crops such as carrots, tomatoes, chillies, corn, cabbage, etc. and natural plants such as coffee, palm oil, rubber, cocoa, and tea. Potential natural resources are also suitable for the development of tree crops. The average height of 1,000 to 2,500m above sea level is very appropriate for the development of coffee plants. It makes this district famous as the largest coffee producer in Sumatra and even Indonesia. Coffee production in 2017 reached 293,577.71 tons (Central Statistics Agency of Bener Meriah, 2018). Approximately 70% of Gayo Arabica coffee in Bener Meriah district has obtained product certificates based on sustainable farming systems such as certified organics, Fair Trade and Rain Forest. The multiplicity of products associated with Gayo Arabica provides a tremendous advantage for the development of its coffee agribusiness in the district of Bener Meriah (Zainura et al., 2016).

Aceh Tengah District produces Gayo Arabica coffee. It is well-known by coffee entrepreneurs, regionally, nationally and internationally. Besides Arabica coffee, Robusta also has quite a good name among local traders. Two different coffee companies have invested in this district. They include Holland Coffee BV, from the Netherlands, and PT. Indocafco from Switzerland. Meanwhile, the Aceh coffee company and the Coffee Company from New Zealand are exploring development. In addition to overseas coffee companies, there is also a local coffee company, the Geunap Mupakat Trading Company. It processes Arabica coffee beans into quality commodities which can satisfy the European, American and Japanese markets. The total export potential of all products reaches 612,000 tons (35 containers) of grade I quality Gayo Arabica coffee, and subsequently 11 containers of Class II quality; all buyers from America and Australia (Central Statistics Agency of Aceh Tengah, 2018).

Bireuen District has agricultural potential, with sago planted out to 862 hectares, and total production of 371 tons. It has 4,847 hectares of rubber plantations with a total output of 408 tons, turmeric production of 165 tons, pepper plants producing 31 tons, hybrid coconut over an area of 773 hectares with a total production of 611 tons, and high-income foreign exchange palm oil with total plantation of 3,690 hectares producing 5,585 tons. Further, it has six tons of patchouli production, coffee plants including several sub-districts covering 724 hectares providing 461 tons, areca nut plantations in almost all districts for a total area of 7,222 hectares and output of 4,236 tons, and a total of 2,339 tons of cocoa. Coconut

plantations occupy the largest area at 17,853 hectares, for a production of 18,263 tons (Bireuen Regency Central Bureau of Statistics, 2018).

### ***Location and Economic Infrastructure***

Location factors influence economic activity such as production or service delivery. Production activities include industrial companies, which process raw materials into finished goods and create other purposes such as the use of space and or time. Service activities, including commercial companies, trade in goods and do not produce products but are still said to be productive because they create proprietary utility (Soepono, 1999). It has been argued that due to socioeconomic developments like globalisation, the emergence of network societies, knowledge-based economies and creative economies, spatial quality has become influential in location choice. Because of an ever-increasing level playing field, increased foot-looseness of organisations and the post-scarcity effect, hard as well as soft primary, secondary, and tertiary location factors are of increasingly limited importance. Consequently, spatial quality may be considered the dominant location factor of our time (Assink and Groenendijk, 2009).

Existing studies of airports (including airport authorities) and ports (including port authorities and container terminals) mainly focus on differences in performance between different ownership/governance structures. The existence of airports and ports has been said to be a good impact on economic growth (Gong et al., 2012). As a centre for various activities, the city will always develop in line with the development of its businesses. Cultural, natural and population factors influence cities' development, with all the accompanying problems. Concerning the community, two things greatly change the development of towns, namely the natural increase and the level of urbanisation. Natural population growth is calculated from the number of births minus the number of deaths of city residents. Urbanisation can be interpreted as a process of distribution or distribution, diffusion, change, and pattern according to time and place. The main goal is to stay settled in the city. People hope that the quality of life in urban areas will exceed that of their original village. This has become both an everyday phenomenon in most developing countries and a complicated problem; the leading macro cause nationally is the disparity between urban and rural development.

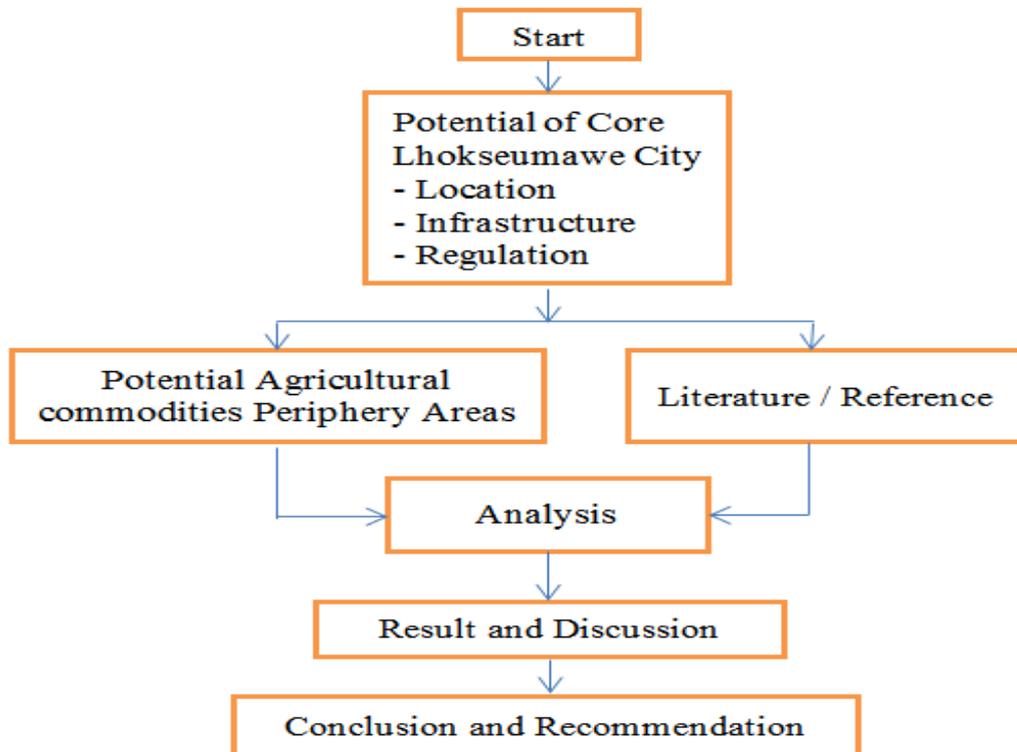
As the core, the city has factors that attract; more complete facilities and infrastructure, and greater continuing education. Further, the types of work are more numerous and varied. Rural-urban linkage has long been the focus of development analysis. This problem arises from empirical facts about the integration of villages and cities which also solves the problem of urbanisation. This connection is increasingly widespread at various levels. It occurs between the village and the city itself, between small towns and big cities, between villages, and between cities that stretch within one country or between countries. Cities, like most

human-made (and even natural) environments, are not uniform and not homogeneous; they form a mosaic of very diverse places and populations (Rapoport, 1978). Villages and rural areas are often juxtaposed as “rural versus rural”. Often, they are also compared with cities and towns. According to (Wojowasito and Poerwadarminta, 1980) interpreted as a village or like in a village "and urban means" like a city or like in a city. Based on these restrictions, rural and urban areas refer to the characteristics of the community, while villages and cities denote administrative or territorial units. In this language, some rural areas can help several villages. According to (Warren and Roucek, 1962), village communities have the following characteristics: the role of the primary group is huge; geographical factors determine community groups; relationships are more intimate and durable; homogeneous interactions typify community structures; there is a low level of social mobility; the family emphasises its function as an economic unit; many children are in the population structure. The stages of village development represent a large part of what is determined by the population in life, and in managing existing resources. The village development stage increases economic, sociocultural and infrastructure factors. Economic factors add to people's livelihoods and village production. Socio-cultural factors include customs, institutions, education, and mutual help, infrastructure, transportation, marketing, and social factors (Rustiadi et al., 2018).

### **Methodology**

The design of this study is a qualitative approach through a literature review. It is based on searching documents in related institutions that are linked to reference literature and theories. The theories are analysed directly, in each section, based on factual discussion as a form of describing the interaction conditions of Lhokseumawe City as a core with peripheral areas. Interactions include those with surrounding districts such as Aceh Tengah, Bener Meriah district, Bireuen district and North Aceh district which is also the hinterland for the city of Lhokseumawe, based on each region's potential. The research method is shown in Figure 4.

**Figure 4.** The research method



The research method begins with a compilation of the potential of the city of Lhokseumawe in terms of location, the availability of economic infrastructure such as ports and airports as transportation support, and the existence of regulations in which the region of Lhokseumawe is determined by the Indonesian Government as a Special Economic Zone (SEZ). Data is then compiled about the potential of the periphery, as a strength that will support the city as a core, and be analysed based on appropriate literature/references. Conclusions are then shown and recommendations made.

## Results and Discussion

Various factors determine village and city characteristics; livelihood, community size, population density, environment, and society with its stratification, interaction, and solidarity. Villages can be defined as a settlement of farmers, while the village according to (Koentjaraningrat, 1977) is a small, settled community that remains in a given location. Rural-urban linkages are apparent, such as the fact that villagers are consumers of goods and services, while the city also consumes rural services and goods. The village-city interaction and mutual benefit in symbiotic mutualism can use the “Agropolitan” concept that supports village development. It can be well approved of, in relation to those village interests needed for cities’ development. The function of the city is more as a centre for non-agricultural

activities and administrative centres, not as a centre of growth, while sub-districts develop functions as development units (Tarigan, 2003).

Lhokseumawe City, as a core for the periphery, has potential in terms of location. It fully supports economic infrastructure and regulation, as a special economic zone. It is strategically located midway between two big cities Banda Aceh City and Medan City. Based on its function, Lhokseumawe is a city of commerce, industry, government, and recreation. However, its function is predominantly that of a trade and industrial city. The population in 2017 was 198,980 people, consisting of 99,282 male and 99,698 female souls. Its annual growth rate is 1.94%. Given that population, Lhokseumawe can be considered a "medium city". That view is based on criteria for medium cities, where populations range between 100,000 and 500,000, and households in villages in 2017, shown in Table 1.

**Table 1:** The village, population, sex ratio and household by sub-district 2017

Sub District	Population				Sex Ratio	Household
	Village	Male (M)	Female (F)	M+F		
Blang Mangat	22	13,865	13,893	27,758	100	6,029
Muara Dua	17	27,461	27,914	55,375	98	12,58
Muara Satu	11	16,723	16,828	33,551	99	7,681
Banda Sakti	18	41,233	41,063	82,296	100	18,729

The population and household of Lhokseumawe City 2013-2017 are shown in Table 2.

**Table 2:** The population and household of Lhokseumawe city 2013-2017

	Years	2013	2014	2015	2016	2017
Population	Male (M)	91,192	93,403	99,282	99,282	99,282
	Female (F)	92,04	94,052	96,136	97,887	99,698
	M+F	183,232	187,455	195,418	197,169	198,98
	Household	40,626	40,726	43,309	44,165	45,019

Although Lhokseumawe was included as a medium city, it can be a core in north coast Aceh, due to its strategic geographical location and availability of infrastructure facilities such as the seaport Lhokseumawe, Airport Malikussaleh, and the designation of Lhokseumawe City as a Special Economic Zone. A SEZ can play a broader role, such as a National Activity Centre and Regional Activity Centre which are expected to drive regional growth. Competitive cities will build relationships with other cities/regions, according to their own size and function. The city government encourages economic development through trade, services, industry, and the utilisation of employment opportunities. Aqaba has been designated a Special Economic Zone. It has regulations to attract local and foreign investment under a comprehensive development scheme. The city has all the incentives and

prerequisites for such a Zone. The city enjoys sophisticated infrastructure, international airports, ports, fast-developing tourism, and modern road networks (Kardoosh, 2005). Lhokseumawe City has various activities, and develops in line with the furtherance of those activities, influenced by cultural, natural and population factors. The sub-district population growth rate in 2017 is shown in Table 3.

**Table 3:** Population growth by sub-district municipality 2017

Sub District	Population Year		Growth %
	2016	2017	
Blang Mangat	26,870	27,758	3.30
Muara Dua	53,766	55,375	2.99
Muara Satu	33,363	33,551	0.56
Banda Sakti	81,187	82,296	1.37
Total	195,186	198,980	1.94

Sustainable urban development is very important for improving citizens' quality of life, and reducing cities' impact of resources outside the urban context. Lhokseumawe City is building and planning green spaces and urban structures, based on sustainable urban planning. Urban planning, that effectively uses the latest technology, is needed to contribute to the physical and social development of the city, by promoting land values and the local economy. National economic sector gaps in Lhokseumawe show that primary agricultural commodity products from the periphery are sent to Java. Conversely, daily needs in the form of secondary products needed by people are imported from Java. This causes gaps in the national economic sector.

The Lhokseumawe periphery is a hinterland consisting of sub-districts, settlements, and villages. The potential periphery comprises the Bener Meriah district, Aceh Tengah district, Bireuen district, and North Aceh district. Each region has potential as a producing region, trading locally, nationally and internationally in the city of Lhokseumawe. The potential of periphery areas determines whether cities can be a core. The potential commodities of Lhokseumawe, North Aceh, Bireuen, Bener Meriah and Central Aceh as shown in Table 4.

**Table 4:** Several leading agricultural commodities of each region

Commodity	Lhokseumawe	Bener Meriah	Aceh Tengah	Bireuen	Aceh Utara
Red Onion	-	6,055	23,412	10	-
Chili	120	225,275	467,152	4,065	115,560
Potato	-	384,270	94,125	4,087	-
Tomato	-	156,140	79,671	6,125	44,341
Avocado	-	33,626	43,943	-	2,010
Orange	-	26,621	14,686	-	40,040
Banana	-	13,272	54,550	-	581,700
patchouli	-	-	-	6	-
Sago	-	-	-	371	-
Turmeric	-	-	-	165	-
Coffee	650	293,577.71	612,000	461	11,100
Sugar Cane	821	3,989	34,797	15,000	-
Cocoa	886	860	278	2,339	36,360
Areca nut	714	10	60	4,236	42,510
Pepper	500	91	2	31	64
Paddy	153,330	-	217,841	2,245,100	314,168
Soybean	200	-	-	3,890	101,140
Palm Oil	2,349	-	-	257,800	198,459
Coconut	579	-	-	18,263	94,050
Rubber	688	-	-	408	51,260

The city of Lhokseumawe has trade interactions. In its periphery the special district of Bireuen and North Aceh district has proceeded according to its own function. Yet this has not provided optimal results. The Lhokseumawe seaport requires an entrance for new arrivals, as well as items not used with port infrastructure, and facilities that are adequate for export-import purposes. Various leading agricultural commodities are an adequate basis for commodity exports between regions, as well as between countries. It has been done, but its frequency remains very low. Agricultural commodities are exported to Malaysia, the destination country. This activity does not run regularly, because a sustainable supply for quantity and quality cannot be guaranteed, thereby eliminating trust from Malaysian partners. Port activities against outflows between goods have run quite well on the types of goods used for infrastructure development materials, such as cement, asphalt and other goods.

Perennials produced in Bener Meriah and Aceh Tengah have not interacted properly. Coffee and cacao production has not provided an economic impact in the northern region, because export activities are still carried out through the Belawan port in North Sumatra. This is due

to the establishment of this activity over years. A permanent network has been created which requires employers from the city of Medan as a business venture in this sector. Bener Meriah district, Aceh Tengan district, and North Aceh district are only coffee and chocolate producing areas, while sales occur in Medan.

Aceh Province, in terms of food and other community needs, should depend on North Sumatra as supplied from Medan. Production from the periphery will then compete with goods supplied from Medan. The government needs to analyse, and make public, policies that can encourage better economic growth on the northern coast of Aceh. Economic interaction between Lhokseumawe as the core, and the surrounding area as a periphery, has the pattern of interdependence. It is a concept where the industrial sector is generally located in the centre as a traditional primary area, and a sector outside the region or the suburbs is a periphery. In this pattern, regions make and supply raw materials to the centre of the developed economy, attracting and advancing economic progress for the periphery.

Aspects of social interaction can be done well. This is supported by agreement; agreement of needs, and approval of life rules. Social interaction can be interpreted as dynamic social relations. Social relations consist of relationships between individuals, between groups, and also between groups and individuals. The social interaction results as associative processes, in cooperation, support, and assimilation. Cooperation is a joint effort with individuals, or groups with groups, to achieve one or several goals. Accommodation can be interpreted as a situation, one balancing interaction between individuals or groups related to social norms and social values that apply in the Lhokseumawe community and its periphery.

Social interaction depends on an understanding of the social space, as input information for determinants of development policy. From this information according to "physical space" and "space-economy," urban planners can optimise the physical, spatial layout of a city. For policymakers, this information will be available in the context of planning space requirements. In this context, "physical space" and "social space" are seen as a comprehensive unit. Data and information related to "physical space" are widely available in various media. The process of collecting data is relatively easier because it is visible, tangible, concrete and measurable. On the other hand, data on social space are very abstract because they are related to norms, thoughts, ideas, and symbols. Because it is abstract, it is not tangible and the parameters are very complex where the information and data available are still very minimal and limited (Paturusi, 2016).

## **Conclusions and Recommendations**

This study analysed the interaction of the core city of Lhokseumawe, with its periphery. It classified the functions of Lhokseumawe, through its population including the medium city.



Even though it is a medium city, it can be a core in the North Coast region, because of its strategic location, its seaport and airport infrastructure facilities, and its designation as a Special Economic Zone (SEZ). Its interaction with the peripheral special district of Bireuen and North Aceh district has proceeded according to its function, yet it has not provided optimal results. The frequency of agricultural commodity exports to Malaysia is sub-optimal, because the quality and quantity cannot be guaranteed, impeding trust from Malaysian partners. The role of the regional government in carrying out its important export activities remains ongoing; the attention of the regional government is still low.

The port activity for goods inflows between regions has gone quite well, in relation to goods used for infrastructure development materials such as cement and asphalt. Coffee commodities produced by the Bener Meriah and Aceh Tengah districts, and cocoa commodities, have not been provided to the economy through the north coast region because export activities are still carried out through the Belawan port in North Sumatra. For food crops such as rice, fruits, and vegetables, the economic interaction with periphery regions has proceeded according to its function. Rural areas supply to the core in fulfilling other regions requirements. Aceh Province is still very dependent on the province of North Sumatra. Almost all community needs are still supplied from the city of Medan, so that production from the region will compete with goods provided from Medan. Good social interactions are supported by agreements, specifically as to needs, and approval of different lifestyles.

The above analysis and conclusions suggest recommendations for economic activities in the north coast region. They can occur through import and export activities of goods distribution to areas in need. It requires more serious government assistance in decision-making, with the agreements or budget assistance that can move the regional economic sector. To increase economic activity in Aceh, effort needs to be made to reduce its dependence on the city of Medan in North Sumatra, in various aspects.

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