ECONOMIC DEVELOPMENT CORRIDOR IN WEST PAPUA

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Acronyms

FDI : Foreign Direct Investment
INPRES : Intruksi Presiden (President Instruction)
Keppres : Keputusan Presiden (President Decree)
GDP : Gross Domestic Product
MP3EI : Acceleration and Expansion of Indonesian Economic Development
UNETEA : United Nations Temporary Executive Authority
PDRB : Produk Domestic Bruto (Gross domestic Product)
PNPM : Program Nasional Pemberdayaan Mandiri
        (The national Program for Community Empowerment)
PT.PELNI : PT. Pelayaran Nasional Indonesia (National Shipping Indonesia)
RESPEK : Rencana Strategi pembangunan Kampung
        (Strategic Empowerment Village Planning)
RPJPN : Rencana Pembangunan Jangka Panjang Nasional
        (Long Run National Planning)
RPJMN : Rencana Pembanguna Jangka Menangah Nasional (Medium Run)
1. Introduction

Economic development corridors play an important role in connecting economic nodes and hubs which are run in urban and rural landscapes. It is crucial because development needs to also be integrated between regions. It requires all stakeholders to take real action in order to boost the inclusive growth. Inclusive growth can only be achieved with good political will and a transformation vision that does not consider development to be “business as usual”.

Indonesia has the potential of natural and human resources. These natural resources are spread across various parts of Indonesia, from Sumatra to the Papua province. The potential of such property requires special attention, integrated management, and appropriate policies. Decentralisation should be able to facilitate the integration among central, provincial and local governments, so that utilization and sustainable management of natural resources can be achieved. Indonesia has the potential of tourism, mineral and energy, and fishing (catch and aquaculture). Papua and West Papua provinces are known to have the richest non-renewable resources (e.g. copper, silver, gold, natural gas, petroleum, and coal), as well as its natural resources such as forest in Indonesia. Papua and West Papua provinces also remain as the third-largest remaining forest areas, after the Amazon basin and forest in central Africa. However, the paradox of natural resources is that the countries with abundant of natural resources particularly non-renewable resources tend to have less economic growth and worse development outcomes than countries with fewer natural resources. In regards to the abundance of non-renewable and renewable resources, Papua and West Papua provinces still have the highest rates of poverty in Indonesia.

This essay will focus on the implementation of developing corridor in terms of its district connectivity to boost the economic growth in two provinces, both Papua and West Papua. My aim in this paper is to provide an overview of current economic development and the challenges faced in Papua and West Papua provinces.
2. What is a development corridor?

When we try to understand development corridor, there is a correlation between economy development and infrastructure development. The empirical evidence shows a positive relationship between investment in infrastructure and the growth of the economy (Driver & De Barros, 2000). This makes sense theoretically because infrastructure enables economic growth through increasing the productivity of other factors of production. However, some point out that, naturally, the correlation between economic growth and infrastructure is poorly understood. Kessides (1993, p. 8) states that “the available studies are not very illuminating regarding the workings of this relationship and therefore the policy implications are not clear.”

The various economic corridors in the region have the potential to simplify movement of goods between different parts of the region. This also promotes development and investment in certain areas. Furthermore, they also offer prospects of investment, trade, and economic development in an area. Transport costs are likely to be considered in infrastructure development and economic growth. Therefore, transporting goods and services along the corridor is a clear to understand that might have significant impact on infrastructure upgrades.

According to Brunner (2013), economic corridors are about connectivity of the agents along a defined geography. They provide linkage between hubs and nodes, which are run on urban landscapes. They link between supply and demand of the markets. Regarding transport, Brunner (2013), contended that economic corridors are not mere transport connectivity along that goods and people move.

3. Development Corridor in Indonesia

In order to accelerate the economic development to support a massive transformation into a developed country by 2025, Indonesia has set a specific development corridor called the Master Plan for Acceleration and Expansion of Indonesian Economic Development (MP3EI). MP3EI provides a basic foundation for the development of Indonesia’s economy by increasing the economic growth by above 6.4 to 7.5 per cent yearly. However, boosting the economic growth is not easy, as reversing the hands and omitting business as usual term through economic transformation. Action must be taken by not only the government,
but all stakeholders must be actively involved in utilizing and improving the country’s resources, manpower, and strategic position to proper its citizens. The private sector can play an important role in developing the economy, as it can promote economic growth and provide job opportunities for the community as a whole. The implementation of MP3EI covers eight main programs that consist of 22 major economic activities. The strategy implementation of MP3EI is integrated into three main elements: (1) Developing the regional economic potentials that are divided into six Indonesia Economic Corridors, including Sumatra, Java, Kalimantan, South Sulawesi, Bali and Nusa Tenggara, and Papua and Kepulauan Maluku. (2) Strengthening national and international connectivity and. (3) Strengthening human resource capacity, and national science and technology in order to support development programs in every economic corridor (MP3EI, 2011).

Implementation of MP3EI is expected to conduct in the long-run (RPJPN) and medium run (RPJMN).

Figure 1. Plans for the Indonesian GDP


A new way of thinking of MP3EI should be based on the spirit of ‘Not Business as Usual’, including implementing infrastructure development. However, there are always issues with the limitation of budget issues. There is also the role of the government for providing rules and regulations which provide incentives for investors to build infrastructure and industries.
Table 1. Twenty two main economic activities

<table>
<thead>
<tr>
<th>No</th>
<th>Main economy activities</th>
<th>No</th>
<th>Main economy activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ICT</td>
<td>12</td>
<td>Oil and gas</td>
</tr>
<tr>
<td>2</td>
<td>Shipping</td>
<td>13</td>
<td>Coal</td>
</tr>
<tr>
<td>3</td>
<td>Textile</td>
<td>14</td>
<td>Nickel</td>
</tr>
<tr>
<td>4</td>
<td>Food Beverages</td>
<td>15</td>
<td>Copper</td>
</tr>
<tr>
<td>5</td>
<td>Steel</td>
<td>16</td>
<td>Bauxite</td>
</tr>
<tr>
<td>6</td>
<td>Defence Equipment</td>
<td>17</td>
<td>Fishery</td>
</tr>
<tr>
<td>7</td>
<td>Palm Oil</td>
<td>18</td>
<td>Tourism</td>
</tr>
<tr>
<td>8</td>
<td>Rubber</td>
<td>19</td>
<td>Food agriculture</td>
</tr>
<tr>
<td>9</td>
<td>Cocoa</td>
<td>20</td>
<td>Jabotabek area</td>
</tr>
<tr>
<td>10</td>
<td>Animal Husbandry</td>
<td>21</td>
<td>Sunda straits strategic area</td>
</tr>
<tr>
<td>11</td>
<td>Timber</td>
<td>22</td>
<td>Transportation equipment</td>
</tr>
</tbody>
</table>


The economic corridor development in Indonesia is based on the potential advantages of each region. The economic corridor development also needs to consider the potential and strategic role each island can play, based on the position of each island and its geographic location.

Figure 2. Corridor Economic Development of Indonesia

4. Snapshot of government policy in Papua and West Papua

Papua is a province of Indonesia, located in the western part of the island of New Guinea, or West New Guinea. This province was called Irian Barat (1969-1973). The establishment of this province was based on transferring of power from United Nations Temporary Executive Authority (UNTEA) to the Republic of Indonesia on May 1, 1963 and as a result of the implementation of the act of free choice conducted from July to August 1969. However, free act choice was initiated under the military oppression that created prolonged socio-political dynamics in the island of Papua (Saltford, 2003).

Papua province was renamed Irian Jaya by Soeharto, inaugurated during the Freeport copper and gold mine, the name was still used officially until 2002. The name of the province was changed to 'Papua', in accordance with Law No. 21 year 2001 Special Autonomy for Papua. Some believe that the enactment of the special autonomy law can be seen as conflict resolution, a win-win solution between the Papuan people who wanted to be seen as separate from Indonesia. Special autonomy in Papua province set out the regional development focusing on infrastructure development, economic empowerment, education and health has created quite a favourable economic climate in Papua province.

‘Papua’ itself is derived from the Malay language meaning curly hair, a picture that refers to the physical appearance of the native tribes. In 2004, Papua was divided into two provinces by the government of Indonesia, the eastern part kept the name ‘Papua’ while the western part was named ‘West Papua’. Papua Province is the largest province in Indonesia, with various native tribes. A high diversity of flora and fauna is also found in this province.

Geographically, Papua is located in eastern part of Indonesia, which lies between 2025’ - 90 South latitude and eastern longitude in 1300 -1410. In 2005, the province of Papua, composed of 19 districts and 1 municipality, with 250 sub-districts and 2,442 villages. Then in 2010, Papua diversified into 28 districts and 1 municipality with 385 districts and 3,565 villages. Yahukimo has the highest number of districts (51 districts and 518 villages), and Yalimo District has the fewest (5 districts and 27 villages; BPS, 2012).
5. Population and Social Economy

5.1. Population

The total population in Papua was 2,935,500 in 2012. According to the data published by provincial government of Papua, the number of migrants has increased significantly over the past decade. Most migrants tend to reside in city areas, while the native Papuans dominate the rural and urban areas. The highest numbers of the migrant population are mostly seen in the capital of Papua province (Jayapura City), which accounts for 273,928 people. The next most popular destination for migrants to live is in Merauke and Mimika.

Table 2. Total population and Population growth rate in Papua Province from 2008-2013.

<table>
<thead>
<tr>
<th>Year</th>
<th>Papua</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Population</td>
<td>Rate</td>
</tr>
<tr>
<td>2008</td>
<td>2699.5</td>
<td>-</td>
</tr>
<tr>
<td>2009</td>
<td>2759.3</td>
<td>3.79%</td>
</tr>
<tr>
<td>2010</td>
<td>2819.9</td>
<td>3.70%</td>
</tr>
<tr>
<td>2011</td>
<td>2879.6</td>
<td>3.62%</td>
</tr>
<tr>
<td>2012</td>
<td>2939.5</td>
<td>3.54%</td>
</tr>
<tr>
<td>2013</td>
<td>2999.5</td>
<td>3.47%</td>
</tr>
</tbody>
</table>

Source: BPS and Bappenas, 2014

5.2. Poverty

One of the social issues are facing Papua, is dealing with the growing numbers of poor people. Figure 3 illustrates the percentage of poverty rate in Papua has decreased significantly since 2010. However, the population growth is higher than the reduction of the percentage of the poverty rate.
Figure 3. The graph illustrates the rate of poverty population in Papua

Source: BPS (2013)

The level of poverty in Papua is still a serious problem and can hinder the progress of the province. It appears that the percentage of poor people each year has decreased, starting from 2008 at 37.1% and in 2013 it decreased to 31.5%. However, this decline is still far from expectations, especially when compared with the national poverty level, which stood at approximately 11.5% in 2013.

5.3. Transmigration Scheme Dynamics

Migration has become one of the most widely discussed topics throughout Indonesia, including Papua. The introduction of the transmigration program by Presidential decree through REPELITA III under the former president Soeharto, had massive impact on population growth in Papua. The transmigration program was designed in order to evenly distribute the populations throughout the archipelago, especially from densely populated Java and Bali, while also to improve people’s welfare.

There was a massive changing of demography in the number of population who move from other parts of area to Papua. According to Statistics Bureau (1974), the total migrant population was 33,923 in 1971. The migrant population had increased rapidly, by more than 20 times, since 2000, more than one third of the provincial population.
Provincial governance categorized the indigenous as *putra daerah*, and non-indigenous as *pendatang*, under the transmigration program (Upton, 2009). Former, Governor Yacob Pattipy (1992 to 1998), adopted the agriculture intensification program from Java, which was related to Indonesia transmigration program.

The implementation of the transmigration program has had several benefits for Papua province in terms of regional development. According to Manning and Rumbiak (1989), the assessment of the transmigration program is seen through two indicators, namely by the increasing the new settler income and improvement in of regional development. From the local and provincial government point of view the transmigration program has direct effect to the local people. From a central government stand point, Irian Jaya was seen as potential agricultural land that needed to be exploited. In addition, Irian Jaya also had shortage of labour for exploiting its resources and project development. Meanwhile, provincial government of Irian Jaya was no less eager to support a massively larger population. Izaac Hindom, former governor of Irian Jaya, saw movement of people from other part of the province as a justification of infrastructure development to remote areas, expanding administration of government, and facilitating the exploitation of Irian Jaya resources (Manning & Rumbiak, 1989).

Another benefit of the transmigration program is the creation of job opportunities in both urban and rural areas. According to Yan Christ Warinussi as cited in Rollings (2010), the transmigration program was also supported with the provision of financial assistance and supplied land for resettlement. This financial endowment benefited migrants, particularly poor migrants, as it provided an opportunity for them to set up small scale businesses. Take an example from Keerom District. Migrants have settled their business in this areas.

President Decree on transmigration programs has also been supported by the declaration of new law, which states that all natural resources and land is owned by the Indonesian state. However, this new regulation is likely to be seen by Indigenous Papuans as having a negative impact, which could threatened their land and natural resources through being exploited not only by migrants but also multinational companies. Indigenous Papuans tend to be denied rights and forced off their land without compensation and/or consent. Furthermore, the transmigration program was problematic since the Papuan way of life is linked to traditional farming techniques and the environment.
A further drawback regarding the transmigration program is increased environmental degradation. Opening new forest areas for the expansion of transmigration tends to exacerbate environmental issues. Most trees are cut down in order to build infrastructure, such as houses and provide space for roads. It seemed that agricultural land clearing is also occurring, which increases losses of biodiversity. The main economy-promoting activities of Papuans depend on hunter and gathering systems. For example, sago plantations, which provide Papuans staple food, have been cleared. Another downside that emerged from transmigration is land right conflicts between Papuans and migrants. Although, under the transmigration law No. 15/1995, as a reviewed law from law No.3 1972, with Keppres (president decree) and Inpres has clearly been regulated. In addition to this, Dominggus Urbon (Chairman of the Chamber of Commerce and Industry (Kadin) Papua Province) states that “The existence of transmigration formed when chieftain, head of customs and forest owners have agreed to use their land as land resettlement, then transferred to local governments and proposed to the central government to be a transmigration area” (Wayar, 2014, August, 27). However, it appeared that there was no land right consent and compensation (Rollings, 2010). This may lead to the emergence of a prolonged conflict. As a result, social, economic, and environmental issues occur, rather than development.

5.4. Economic Development in Papua and West Papua Province

5.4.1. Earlier, current economic development and social situation

Since Papua was integrated into Indonesia in 1963, hundreds of thousands of people from other places have been migrating to Papua. In 1969, the economy of Irian Jaya that called “Papua” was highly fragmented. As Indonesia was colonialized by the Dutch, the Dutch had control over Irian Jaya and there was a poor development of infrastructure, poor connections of communication, and poor sea transportation systems. There was also a poor trade link to connect urban and rural areas. These connections could only be reached using sea transportation linkages, as there was no road connection from Kabupaten (districts) to central provinces. Thus, small mission planes played a vital role in connect all districts (Manning & Rumbiak, 1989).
According to the World Bank (1984), in the early 1971, the agriculture sector was the greatest contributor of regional GDP (60%), it followed by Government administration with 12%, and Services at 9%. While the rest of the percentage was shared by Mining, manufacturing, construction, transportation, trade and other sectors. However, the sectoral contribution to the Regional GDP changed in 1969, so that the proportions of trade, transport, construction, and Government expenditure sectors changed to 16%, 8%, 7% and 17%, respectively. Adversely, the total contribution of the agriculture and services sector decreased to 44% and 5%, respectively (Manning & Rumbiak, 1989).

Source: Attachment of local regulation of Papua Province No. 14 Year 2013

Papua as one of the richest islands in Indonesia with an abundance of natural resources, it plays a vital role in contributing to national, provincial and local incomes. Operations of mining, gas, oil, fisheries, and forestry has been undertaken since 1970s. This has led to the growth of the public expenditure, strong population growth and the increasing the diversification of the Papuan economy (McGibbon, 2004). Mining has shared the highest amount of the total GDP in the Papua province. In 2002, mining and quarrying contributed 64.6% of the total GDP, while 14.6 % was contributed by agriculture sectors (BPS Papua, 2008).

Gross Regional Domestic Product (GDP) of Papua Province in 2011, including the mining sector was estimated based on the prevailing price of IDR at 76.37 Trillion, and based on constant prices in 2000 this amounted to 21.13 trillion rupiah. Differences in the value of GDP with and without the mining sector (both constant
prices 2000 and current prices), shows the high dependence of Papua on the mining sector as a major source of revenue for the province of Papua (Perda, 2013). GDP growth in the mines is not consistent for both types of price, but both show a consistently declining tendency toward GDP contributions. Therefore, government should find other resources to generate GDP, such as exploiting other natural resources.

In the past three decades, the investment sector in Papua and west Papua experienced small progress. Foreign and domestic investments were attracted to invest the capital in both regencies. Success of this operation was done under the former president Soeharto. Moreover, central government also fully supported these investments in setting up their businesses in both provinces. However, those businesses were provided by military power. For example, from 2003 to 2005, the operations of logging companies in Fak-Fak, Bintuni, Jayapura, Manokwari and Sorong were all controlled by military. The role of the military here is as the ‘protector’ of the companies that are owned by the Chinese, Koreans, and Malaysians. This triggers conflicts, not only between the indigenous communities and companies, but also among local communities regarding their land ownership, such as tribal conflicts (Wing & King, 2005). This political situation and the lack of clarity over land ownership tend to become a hindrance when setting up businesses in both provinces.

Papua and West Papua provinces are in behind the other provinces in terms of the education standard. The education infrastructure is poor with poor facilities and limitation limited number of teachers in inland areas. This is because most educated teachers tend to work in urban areas (e.g. Jayapura, Nabire, Manokwari, Sorong, and Fak-Fak), although government provides remote allowance schemes. As a result, the numbers of students in rural inland areas are far greater than the number of teachers available.

Table 3. Students and Teachers numbers in primary education level from 2007 to 2011 in Papua Province
### 5.4.2. Community-Based Development

The national Program for Community Empowerment is a community-based development program that is a collaboration between two programs, namely Rencana Strategi Pembangunan Kampung (RESPEK) (Strategic Plan for Village Development) and Program Nasional Pemberdayaan Masyarakat Mandiri (PNPM) Rural. RESPEK is a Papuan program launched by Governor Barnabas Suebu, which was merged with the PNPM program because it follows similar principles. In 2008, official RESPEK collaborated with PNPM into PNPM Mandiri-RESPEK, which runs community-driven development with a focus in villages. In 2003, the RESPEK programme was renamed, by the new elected governor, to PROSPEK. The provincial government provides annual block grants of IDR 100 million to 3,923 villages across West Papua and Papua. This program is not just primarily focused on infrastructure in villages, including gravel roads, schools building, health clinics, and main roads, but also on building and strengthening community capacity to plan, build and maintain infrastructure. Local communities are fully involved, and implementation of RESPEK in both provinces is promising, but there are many challenges, including the expensive cost of building materials. It seems that IDR 100,000 million is not enough for the big project; therefore, the communities need to be wise prioritise which development(s) should be put first.

### 6. Interconnections of Regional transportation system
Infrastructure is one of the main instruments of linking and integration inter districts. The infrastructure sector is also vital to encourage economic growth. Investing in infrastructure connects a wide range of economic activities.

6.1. Road Infrastructure Development and Trans-Papua Road Network

Development of inter-district transport networks is also a priority as part of accelerating the regional development that enhances the welfare of the community as well as improving local community’s welfare. Infrastructure investment must be realistic within technical limitations and budgeting. Geographically, Papua and West Papua provinces are the most difficult provinces to reach, since both are located in the eastern part of Indonesia. Most districts are located inland and can often only be reached by plane.

![Initiated road development in Papua and West Papua Province](http://mangomap.com/maps/10853/Papua%20dan%20Papua%20Barat?preview=true#)

*Figure 5. Initiated road development in Papua and West Papua Province*

Road development program called “Trans-Papua Links” in Papua and West Papua has planned and developed by Local government through infrastructure department and through military. A trans-Papua highway has been designed to connect Jayapura via
Nimbokrang, and Lere to Wamena, Mulian, Enarotali and Nabire, particularly along the northern coastline.

Road infrastructure development in central, provincial and local governments has been initiated and dedicated enormous amounts of money in order to link inter districts by road. This road development initiative has been estimated to be finalised by 2017 with IDR 12 trillion budgeted along 6,000 km. Based on provincial data, the Papua province network was 16,899 km in length in 2006, while network of West Papua was 5,184 km in length 5,184 km in 2007 (World Bank, 2009).

The trans-Papua highway should provide better mutual connections between all districts, high quality transport routes, relief transportation route starting from the northern part of Papua (e.g. Jayapura, Sarmi, Nabire, and Manokwari), as well as inland of Papua and West Papua, access to traditional markets, particularly in remote areas, and development of economy activities. Tables 4 and 5 illustrate the road development performance from 2004 to 2007.

**Table 4. Road Network – Papua Province (km)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Administrative</th>
<th>Surface type</th>
<th>Tot</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>National</td>
<td>Provincial</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>267</td>
<td>576</td>
<td>28</td>
</tr>
<tr>
<td>2005</td>
<td>ND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>1848</td>
<td>1562</td>
<td>168</td>
</tr>
<tr>
<td>2007</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Papua in Figures

**Table 5. Road Network – West Papua Province (km)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Administrative Class</th>
<th>Surface type</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>National</td>
<td>Provincial</td>
<td>Districts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Asphalt</td>
</tr>
<tr>
<td>2004</td>
<td>345</td>
<td>487</td>
<td>1115</td>
</tr>
<tr>
<td>2005</td>
<td>345</td>
<td>488</td>
<td>1122</td>
</tr>
<tr>
<td>2006</td>
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<td>488</td>
<td>1122</td>
</tr>
<tr>
<td>2007</td>
<td>616</td>
<td>686</td>
<td>3882</td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** West Papua in Figures
Recent infrastructure developments on roads in Papua and West Papua have increased a lot from 2006 to 2007, with IDR 5.2 trillion; 3.2 trillion to Papua province, and IDR 2 trillion to West Papua province. This number increased to IDR 7 trillion in 2015, particularly for the Papua province (suarapapua.org). Regarding the trans-Papua road development, there are 3,985 km of road targeted to be finished in 2019. According to the current president, Joko Widodo, during his visit to Papua on May 2015, developing trans-Papua highway will stabilize the price of goods as the other four islands in Indonesia (Diela, 2015). These initiatives are greatly appreciated because they provide connectedness among the districts, which will minimize barriers and increase the community welfare.

Infrastructure development and connectivity between regions form an essential part of both provinces’ development. Provincial government has put forward a number of actions. Provincial government of Papua has significantly increased the allocation of budget for the Infrastructure development sector. In 2014, and 2015. This number increased from IDR 571.4 billion in 2013 to IDR 2 trillion in 2014 or it increased about 250 per cent.

6.2. Challenges of the road infrastructure development;

The role of transport costs has had an enormous impact, on both the forming of a connection between the districts and economic performance. The large amount of money dedicated to the infrastructure development in Papua. However, the biggest
challenges that government have been facing are the high cost of transportation. Most infrastructure facilities are transported from Java and Sulawesi, that spent big amount of money. Bringing infrastructure facilities also take weeks from Java to Papua and West Papua. Moreover, infrastructure facilities are transported by plane to the highland of Papua, and thus, the situation is exacerbated with the high cost of transportation. For example, there was a huge difference between the price of a bag of cement in Jakarta and Oksibil (Pegunungan Bintang district). This difference in price affected the construction of building of offices, houses, and/or roads. Limitations of budgeting can, therefore, also constrain the development of roads. This also worsens with high rainfall, which affects the condition of the soil, having a knock-on effect on the body of the road. As a result, although the government built the roads, they tended to be easily damaged, due the occurrence of high rainfall.

Another chronic problem regarding infrastructure is the high maintenance costs. Most road infrastructure built tends to stay in good condition for only several years. This is because many roads, bridges construction that built tend to pursue the quantity, rather that quality of the road. For example, in the development of the road in Nabire, Dogiyai, Deiyai and Paniai districts (trans-Papua road scheme). Between 2008 and 2013, the road development between these districts was only in good condition for 3-4 years, after which it began to get damaged. Therefore, the evaluation and the supervision of the public servant toward road and bridge development should be strengthened.

Table 7 describes the cost of a bag of cement, providing an overview of the costs of goods in Papua and West Papua provinces. The more isolated an area, the higher the price of goods.
Table 7. Cost of a bag of Cement in November 2008

<table>
<thead>
<tr>
<th>City</th>
<th>Price per Sack (IDR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jakarta</td>
<td>50,000</td>
</tr>
<tr>
<td>Jayapura/Manokwari</td>
<td>75,000</td>
</tr>
<tr>
<td>Wamena</td>
<td>500,000</td>
</tr>
<tr>
<td>Mulia (Puncak Jaya)</td>
<td>1,300,000</td>
</tr>
<tr>
<td>Oksibil (Pegunungan Bintang)</td>
<td>1,500,000</td>
</tr>
</tbody>
</table>

Source: World Bank staff survey

6.3. Air and Sea Connection

Papua and West Papua heavily depend on air and sea transportation because they have very hilly topography, ravines, mountains and islands. There are at least five airports in Papua, and four airports in West Papua. Most areas that are connected to the sea are much easier to provide goods to, while landlocked areas are heavily dependent on the air transport. Along with efforts to increase economic activity and the role of each districts/municipalities as the centre of development, central government and provincial government has planned for the development of public ports (sea and air), container and fishing port (whose location is tailored to the location of fishing grounds). Most of the sea links are served by the Indonesian national shipping company called PT.PELNI. There are more than six ships that serve throughout Papua. Transportation networks in Papua and West Papua provinces have been served both by sea transport link and ferry transport. Ferry transport links mainly focus on small islands in marine national attraction areas that connected Biak, Patani (North Maluku), Waigama (Misol), Tual (Maluku), Wahai (Maluku), and Klademak (Sorong). Meanwhile, sea transportation links by ships are focused in capital cities and are spread throughout the coastal regions of Papua and West Papua.
Figure 6. Sea Link between Papua, West Papua and Maluku Province

Source: http://www.pelni.co.id/content/File/Annual-Report-PELNI-2013.pdf

7. Mining and the contribution to the local economy

Papua and West Papua are known as being rich in natural resources. Natural resources generate a large amount of income, both locally and nationally. The operation of the mining, oil, fishery, and forestry have been carried out since the 1970s. This has driven high economic growth, triggered high public spending, initiated strong population growth, and increased economic diversification in West Papua (McGibbon, 2004).

Table 8. The percentage of Regional Income (PDRB) sectoral in Papua Province with mining in 2007-2011

<table>
<thead>
<tr>
<th>No.</th>
<th>FIELD SECTORS</th>
<th>Current Price</th>
<th>With Mining Constant Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Agriculture</td>
<td>10.01</td>
<td>10.32</td>
</tr>
<tr>
<td>2.</td>
<td>Mining</td>
<td>68.72</td>
<td>64.73</td>
</tr>
<tr>
<td>3.</td>
<td>Processing Industry</td>
<td>1.62</td>
<td>1.62</td>
</tr>
<tr>
<td>4.</td>
<td>Electricity and Clean Water</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td>7.</td>
<td>Transport, and communication</td>
<td>4.05</td>
<td>4.52</td>
</tr>
<tr>
<td>8.</td>
<td>Finance, lease and services</td>
<td>1.48</td>
<td>1.77</td>
</tr>
<tr>
<td>9.</td>
<td>Services</td>
<td>4.86</td>
<td>6.00</td>
</tr>
<tr>
<td></td>
<td>Income Regional Bruto</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Papua in figures (2007-2012)
The mining sector contributed 68.72 billion in 2007, while the second highest contributor of GDP was agriculture; (Table 8). Transport, and communication and finance, and lease and services contributed the least to Papuan GDP in 2007. In 2011, agricultural sectors grew significantly, contributing 11.71 billion, while GDP generated from the mining sector decreased by 52.46 billion. It seems that Papua and West Papua GDP heavily depend on the mining sector (Table 8).

8. Agriculture expansion and existence of landscape

8.1. Agriculture Expansion

Recently, the expansion of the agriculture sector in Papua and West Papua provinces is widely concerned. Agricultural expansion is conducted under the Law of INPRES No. 05/2007; where Papua and West Papua are listed as the poorest provinces. Particularly in Papua and West Papua, the land which could potentially be used for agriculture covers more than 2.6 million ha, yet only 33 per cent of this land is currently utilised (Supriadi, 2008).

In the last three decades, the community agriculture sector in Papua and West Papua provinces has not really changed. Underdevelopment of the agriculture sector in Papua and West Papua appears be caused by an interaction of factors, including biophysical (land resources), sociocultural (human and institutional), political and techno-economic factors. The complexity of the interactions between these factors lead to a very slow innovation adoption process that leads to low levels of welfare, high levels of poverty, and the resilient of the food security.
As can be seen in table 9, there was a massive change in land use across several districts, from 2008 to 2012. Teluk Wondama experienced the largest change in land utilization from 116,200 ha in 2008, to 53,800 ha in 2012. While Sorong City and South Sorong’s land cultivations increased by half of the total land cover areas which was from 90.101,00 ha in 2008 to 599,00 ha in 2012, and 30546,00 ha in 2008 to 15.949 ha in 2014, respectively.

During the last several years, the agriculture sector has expanded massively through oil palm plantations, and has become one of the most rapidly expanding crops in both Papua and West Papua. There are 2.6 million ha of land dedicated to the oil palm expansions, throughout Papua and West Papua (Franky & Morgan, 2015). This is also followed by the opening of new agriculture areas, especially for the paddy plantations. Such widespread and rapid expansion of agriculture has a significant impact on the economic growth of both provinces. The opening of oil palm plantations has spread over several districts / municipalities throughout the Papua and West Papua provinces such as Nabire, Merauke, Keerom and Manokwari districts (Franky & Morgan, 2015).

Merauke Integrated food and Energy Estate (MIFEE) was introduced in 2010 in order to strengthen agro-fuel supplies, strengthen national food, and improve food security. The MIFEE program also supports the existing programmes in community business and development of self-sufficient major food crop, such as cassava, corn, sugar cane, sago;
but, this program did not run effectively. Access to local people (Malind people), in terms of utilization of natural products, was being restricted while the jobs that were promised by oil palm companies did not provide welfare to the people Malin (Franky & Morgan, 2015). Furthermore, locals have different customs and languages, and land plays an important role for Malin people, because traditionally land provides the subsistence they need.

However, it is true that the national agricultural scheme tends to bring several benefits for locals. Currently, the president of Indonesia, in his visits thought Ministry of Community Housing, has developed paddy fields covering about 1.2 million ha in order to support Merauke as a ‘bowl of national food security’. However, rice cultivation programs that have just been implemented in Merauke tend to be criticized by the local community regarding their livelihood. One reason for this is that the paddy and oil palm expansions need to cover a large amount of land. As such, many sago tree plantations are cleared. This deforestation tends to overlook indigenous Malin people, in that their sago trees provide their staple food source, as well as the local community’s Non-timber forest products (NTFPs) dependency. This may result in a shift of traditional values in local communities, and they may find it difficult to adapt to the new conditions of life, compared to what has been taught by their ancestors. Another example is in the Nabire district. There are no indigenous paddy farmers, although rice plantations have been common agricultural practice since the 1980s. Locals are not benefitting from the cultivation of the rice, in terms of providing jobs.

Implementation of the mega food project (MIFEE), in 2010 by the Ministry of Agriculture, was a strategy to accelerate development and alleviate rural poverty in the region. However, local communities, including academics, have blamed the implementation of this project for marginalising the indigenous in terms of their land, as well as their livelihoods. This has led to the tensions over land ownership between Indigenous people and private companies, and within clans in many areas (Lamonge, 2012).

8.2. Infrastructure Development and changing landscape

There is a growing body of literature on the link between road development and landscape changing. From an economic viewpoint, road development is seen as a positive outcome for boosting economic growth. Many economists support road development,
and they believe that establishment of roads is a cost-efficient method to promote growth, encourage regional trade, and provide access to natural resources, and land suitable for agriculture. However, in the example of the Sumatera and Kalimantan Islands, since roads have been provided, and investments have been set up, the environment has suffered and the level of forest cover has significantly decreased (Curran et al., 2004).

It is believed that provision of roads will increase the economic activity, including the expansion of the oil palm industries, and clearance of forests that results in the loss of biodiversity. The total average of deforestation rates in the Papuan province, between 2006 and 2011, reached 25.68 thousand ha/year, and the average of environmental degradation reached 181.77 thousand ha/year (CGF, 2013). The main cause of deforestation is the conversion of forest areas (Wasur National Park), illegal logging in North Biak Nature reserves, and the opening the new infrastructure areas, including roads, agricultural land and plantations, as well as settlement.

![Figure 7. Forest, Deforested and Water Cover areas](http://www.gcftaskforce-database.org/StateOverview/Papua)

9. Investment in Papua and West Papua provinces

Strategies for promoting exports have seen FDI (foreign direct investment increase rapidly, which started in the mid-1980s in Indonesia (Rahmaddi & Ichihashi, 2013). In order to attract FDI between 1985 and 1986, the government of Indonesia relaxed foreign property
restrictions and divestment requirements for the orientation of export and firms in bonded regions. This was followed by the establishment of regulation 17/1992 on the ‘requirements for share ownership in foreign Capital investment Companies’. This regulation was furthered strengthened by the establishment of investment facilitation programs that allowed for 100 per cent of foreign proprietorships. Currently, Indonesia has become one of the most popular destinations for FDI in Eastern Asian counties due to pull and push factors of the economy, including lower production cost, increasing labour cost at home, and the elimination of foreign exchange controls (Azis, 1998). The government has liberalised the trade through relaxing foreign investment restrictions in export oriented industries, reducing the protection of trade, including reducing import tariff and non-tariff barriers, and improving the level of bureaucracy.

Special autonomy has been granted to Papua and West Papua province which provides a tremendous opportunity to maximize the potential of natural resources with the aim of boosting economic empowerment. To manage the natural resources, required capital is expected to come from investors. The success of inviting foreign investors cannot be separated from the role of local governments, related agencies and people in the area.

![Figure 8. Total Investors in Papua Province 2005-2009](chart.png)

*Source: Badan Penanaman Modal Provisni Papua;*

It can be seen that total number of foreign investors in Papua were higher than the number of domestic investors in 4 year period shown (Figure 8). Total foreign investment companies from 2005 to 2009 also increased significantly across this time period. There were 65 of foreign investor companies in 2008, which increased to 74 in 2009; while
domestic investor companies totalled only 28 in 2008, rising to only 29. It appears that the success of local government in attracting foreign investment cannot be separated from the various policies that have been issued. Policies issued by the local government aim to provide easiness, either in the form of ordinances or licensing investment. It is expected to increase the number of total investors for the next coming period. Central government, through Investment Coordinating Boards, have planned to invest IDR 265 trillion in Papua and West Papua provinces from 2015 to 2019. This amount of money was invested in order to promote economic growth in four regional economies in both provinces, namely in Merauke, Sorong, Teluk Bintuni and Raja Ampat (Pasopati, 2015).

10. Conclusion

Indonesia development corridor represent a relationship between infrastructure and economic growth in action and to explore the mechanism at work. Transport infrastructure in particular is seen to play vital role in regional integration. The integration of infrastructure facilitate the movement of goods, services, labour that are very heavily depend on transportation services. The availability of the transport infrastructure promote and development the investment environment in any particular areas.

Corridor economic developments are translated into several areas, including Trans-Link Papua road infrastructure development. This insightful program seems to be a promising program that could improve community welfare and also reduce income inequality among households, and among islands, including western and eastern Indonesia. However, it cannot be denied that a number of issues would emerge, such as environmental degradation, land right conflict and other social-economic issues, including indigenous disadvantage. Therefore, local governments need to anticipate these in order to minimalize such issues by empowering, getting locals to participate in the development of these corridors. The overall development of Papua and west Papua are experiencing small progress. However, under the elected president with transformation idea, the economy expected to grow significantly regardless linked to political instability.
REFERENCES


