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Transformation of aboriginal communities towards the Regional Development of Iskandar Malaysia

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Abstract. Natural resources have been home to the Aboriginal communities for hundreds of years. However, modernizations have transformed the natural resources into an urban area that changed the livelihood of an indigenous community. Therefore, this paper aims to investigate the impacts of regional development towards Aboriginal communities in Iskandar, Malaysia. Kampung Simpang Arang was selected as a case study. Kampung Simpang Arang is located in southeast Iskandar Malaysia, where the majority of the community was the Seletar tribe. The Seletar tribe is one of the earliest aboriginal communities settled as indigenous coastal communities. This village is selected due to its location within a 15 kilometres radius of high-impact projects such as Tanjung Pelepas Port, Legoland and Tuas Checkpoint. A total of 50 Aboriginal people in the village were involved in the household survey. The findings highlighted that the economic structure has developed from just fisheries and collecting forest products to the industrial sector. Other regional impacts identified towards the Seletar community are improved infrastructure, education, possession and health care and the low youth migration rate. Therefore, this study contributes to understanding the repercussions of regional development in Iskandar Malaysia on the socioeconomic structure and quality of life of the Seletar tribe, informing future policies and actions to address the needs and challenges.

1. Introduction

The Aboriginal people or known as Orang Asli, have been inhabiting Peninsular Malaysia for approximately 5,000 years, thus being the earliest known inhabitants of the region. The prevailing belief is that the majority of individuals originated from China and Tibet, subsequently traversing migration paths across the Southeast Asian mainland before establishing a presence in Peninsular Malaysia and the Indonesian archipelago [1]. Aboriginal people in Malaysia consist of three races, namely Senoi, Malay-Proto and Negrito. Senoi is the largest race, with a total of 97,856 people (54.9 per cent), followed by Malay-Proto with a total of 75,332 people (42.3 per cent) and Negritos with a total of 5,009 people (2.8 per cent) [2].

According to [3], the Negritos encompass six sub-ethnic groups, namely the Kensiu, Kintak, Lanoh, Jahai, Mendriq, and Bateq. On the other hand, the Seniors comprise six sub-ethnic groups, namely Che Wong, Mahmeri, Jahut, Semaq Beri, Semai, and Temiar. Lastly, the Proto-Malays consist of the Kuala, Kanaq, Seletar, Jakun, Semelai, and Temuan sub-ethnic groups. Based on [4], there are several characteristic features of aboriginal people:

- (a) The occupation of ancestral lands, or at least a portion thereof.
- (b) Shared ancestry with the original inhabitants of said lands.



- (c) Cultural practices and beliefs, including but not limited to religion, adherence to tribal systems, membership in indigenous communities, traditional attire, livelihood practices, and overall lifestyle.
- (d) Language usage, encompassing its exclusive use, mother tongue status, habitual communication within the family or at home, or as the primary, preferred, habitual, general, or normal language.
- (e) Residency in specific areas within a country or regions; (f) Other pertinent factors identifying individuals as distinct peoples following their cultural norms, social institutions, and legal systems.

The concerns and problems associated with urban transformation growth have persisted since before the British administration, especially in rural areas and small towns [5]. Due to the high population dynamics, socio-demographic changes cannot be prevented in regional development. In-migration within the regional development area encounters an impact on the rural communities within the regional development area. This issue raised the question of whether regional growth can help a community improve its well-being or cause problems that worsen the community's well-being. Therefore, this paper aims to investigate the impact of the regional development of Iskandar Malaysia towards aboriginal communities.

2. Literature review

2.1. *Aboriginal community in Malaysia*

The economic sectors for Aboriginal people in Malaysia are hunting and gathering natural resources in their surrounding environments, including forests, rivers, and coastal areas, to provide food and materials for their communities, such as in fisheries or collecting forest products [6]. There are also Aboriginal people that have income from selling handicrafts such as weaving, basketry, pottery, woodcarving and other traditional craftsmanship [7]. In recent years, eco-tourism and cultural tourism have developed in aboriginal villages. Aboriginal villages are popular travel destinations for people looking for special cultural experiences because they have a rich cultural heritage, follow traditional customs, and boast beautiful natural surroundings that can be the potential to create job opportunities and income for Aboriginal communities [8].

Each Aboriginal community has unique cultural practices that contribute to the diversity of Aboriginal people in Malaysia. These unique cultural include traditional music, dance, crafts, traditional practices, games, cultural festivals, ceremonies and food [9]. In terms of educational background, The quality of education among Aboriginal people still needs to improve and significantly trails behind that of mainstream society [10]. Based on [11] major factor of this issue is because accessibility of children in orang asli to go to school because settlements are predominantly situated in rural areas, far from well-developed towns and cities that have good infrastructure and facilities. The distance between the homes of Orang Asli children and the nearest schools is far, and no connectivity, such as paved roads and bridges [12]. Moreover, the need for more reliable public transportation, such as buses, further exacerbates the issue due to the challenging connectivity in these remote areas.

Regarding health, authorities perceive the Aboriginal people as "backward, ignorant, and resistant to modern health services," attributed to their poor health [13]. Moreover, the health of Aboriginal people is affected by disparities and challenges such as limited access to healthcare, health education, and cultural barriers [14].

2.2. *Transformation of the Aboriginal village towards the development*

The development transformation near the Aboriginal village has significantly impacted the community [15]. Based on [5], the development transformation can have positive impacts, such as improved infrastructure, economic opportunities, and better access to services for Aboriginal communities. However, there are also negative impacts such as resettlement, loss of cultural heritage of aboriginal people, socioeconomic inequalities, and environmental degradation. Past research discusses issues and transformations of Aboriginal people that focus on the economy, migration, culture, health, education, and infrastructure. The economics of aboriginal has been discussed by [16]. The development process is leading to significant changes in the forest environment, driven by government policies prioritizing

agriculture and resettlement. These changes also influence the local economy, contributing to shifts in economic activities such as The Agriculture Land Development Program (ALDP) under the economic development program JAKOA which is agriculture and farming fruits, vegetables and fish for own consumption or local trade [17].

Malaysia has experienced rapid economic development and urbanization, especially in major cities and urban centres. This has resulted in rural-urban migration, where people from rural areas, including some Aboriginal villages, move to cities and towns for better opportunities and living conditions [18-19]. Other research focuses on migration because of resettlement set up by the government [9]. Moreover, there are studies about culture [20] practice of traditional culture by youth aboriginal people that have been influenced by urban areas and the nature of aboriginal people's culture [18]. The aboriginal villages' infrastructure can also be improved due to urban overflow to rural areas [9-21]. In addition, there is research on the transformation of the level of education in the communities [22-23]. Based on research by [24] and [25] that mentioned transformation into improving the healthcare of the Aboriginal village. Furthermore, the possession of items and electric applicants from traditional to advanced equipment [26-27-28].

Table 1. Past research on the transformation of the Aboriginal village

Indicators	Description	Source of Benchmark
Economic	Measures the economic development and livelihood opportunities in Aboriginal communities, including income levels, employment rates, and economic diversification	[16],[17]
Migration	Examines the internal and external migration patterns affecting Aboriginal populations and how it impacts the social and cultural fabric of the community.	[18],[19],[9]
Cultural	Assesses the community's preservation and revitalization of Indigenous culture, language, traditions, and knowledge systems.	[9],[20],[18]
Infrastructure	Evaluates the availability and quality of essential infrastructure, such as housing, healthcare facilities, clean water, and transportation, in Aboriginal villages.	[9],[21]
Education	Analyzes the state of education in Aboriginal communities, including access to schooling, educational attainment, and efforts to promote culturally inclusive and effective learning environments.	[22],[23]
Health	Address the overall health and well-being of Aboriginal people, including access to healthcare services, health outcomes, and efforts to improve community health.	[10],[24],[25]
Possession	Examines land tenure and ownership rights of Aboriginal communities over their traditional territories and resources.	[26],[27],[28]

Table 1 shows the indicators of the transformation of aboriginal people and villages that other researchers are studying. Therefore, this study will also consider all of the indicators to be used in this study: economic, migration, cultural, infrastructure, education and possession.

3. Methodology

The impact of the regional development of Iskandar Malaysia towards aboriginal people is using quantitative methods through a questionnaire form. This study uses purposive sampling by selecting a head of household (household service). Furthermore, the qualitative method through in-depth interviews with tok batin is used as secondary data to support. In-depth interviews will be conducted to gather information about the effects of regional development on rural communities and to complement the questionnaire for the household survey. This study involves 40 heads of households and one head of the village (Tok Batin).

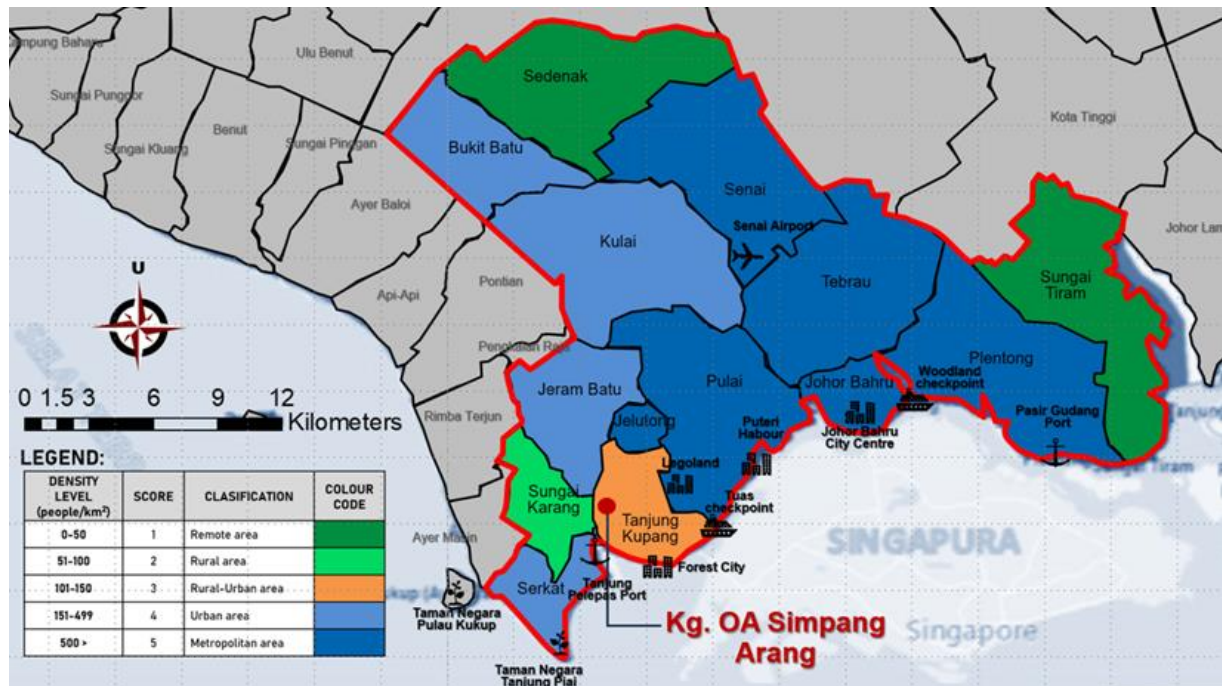


Figure 1. Kampung OA Simpang Arang in Iskandar Malaysia Regional Growth Region

The development of the Iskandar region has caused positive and negative impacts, such as villages experiencing developmental pressures from urban overflow are problematic low socioeconomic and quality of life [29]. Kampung OA Simpang Arang, located in the Tanjung Kupang sub-district, is categorized under the rural areas, which a density level is 101-150 people/km². Moreover, Kampung OA Simpang Arang is located near high impact Projects such as Forest City 6.0Km, Tanjung Pelepas Port 8.3 Km, Tuas Checkpoint to Singapore 8.0 Km, Legoland 4.6 Km, Johor Bahru City Centre 23.0 Km. According to Tok Batin, this village had 165 houses and 738 people in 2020. 95% of the community is in the Seletar tribe, and the main economic sector in this village is fisheries.

This study employs a mean score analysis to assess the level of satisfaction within the B40 income group while considering factors identified by previous researchers (listed in Table 1). The exclusive focus on the B40 income group results from all respondents in Kampong OA Simpang Arang belonging to this category. Table 2 further displays the B40 income classification of respondents with average incomes.

Table 2. Respondent income classification

Income Classification	Total Respondent	Average Income
B1 <RM2500	46	RM1232.61
B2 RM2501-RM3170	3	RM2866.67

B3 RM3171-RM3970	1	RM3500.00
B4 RM3971-RM4850	0	-

This analysis employs a five-score scale to assess the level of satisfaction, encompassing specific categories with defined score ranges. The levels of satisfaction are categorized as follows: "Very Low" for scores ranging from 0.00 to 2.00, "Low" for scores between 2.01 and 4.00, "Moderate" for scores between 4.01 and 6.00, "High" for scores between 6.01 and 8.00, and "Very High" for scores falling within 8.01 and 10.00. A comprehensive reference for each level's description can be found in Table 3, offering clear insights into the interpretation of scores and the respondent satisfaction levels.

Table 3. Assessment Level of Satisfaction

Score	Level	Definition
0.00 – 2.00	Very low	The individual expresses discontent or disappointment, indicating that their expectations were not met and there is a clear need for improvement.
2.01 – 4.00	Low	The person indicates a certain level of satisfaction, but notable aspects could be enhanced to achieve a higher level of contentment.
4.01 – 6.00	Moderate	The individual acknowledges a satisfactory level of contentment, though there may be room for improvement or minor areas of concern.
6.01 – 8.00	High	The person is highly pleased with the experience or outcome, feeling it has exceptionally met their expectations.
8.01 – 10.00	Very high	The individual expresses a high level of contentment and fulfilment, indicating that their needs and expectations have been exceeded.

4. Result and Findings

The transformation process may bring opportunities and challenges for Aboriginal communities as they navigate through shifts in their socioeconomic conditions, access to education and healthcare, land rights, and preservation of their cultural heritage [30]. Understanding the dynamics of this transformation is crucial for ensuring the well-being and empowerment of Aboriginal people while preserving their unique identities and traditions.

Table 4. Level of satisfaction aboriginal people towards the indicators

Indicator	Factor	Income Group Classification	Mean Score	Level of satisfaction
Economic	Able to support my family well	B1 <RM2500	5.80	Moderate
		B2 RM2501-RM3170	6.33	High
		B3 RM3171-RM3970	9.00	Very High
	Stable job	B1 <RM2500	5.59	Moderate
		B2 RM2501-RM3170	6.78	Moderate
		B3 RM3171-RM3970	9.00	Very High
Migration	Migration to another village	B1 <RM2500	8.91	Very High
		B2 RM2501-RM3170	9.25	Very High
		B3 RM3171-RM3970	8.75	Very High
Cultural	Involvement in cultural activities	B1 <RM2500	5.09	Moderate
		B2 RM2501-RM3170	3.33	Low

		B3 RM3171-RM3970	9.00	Very High
Infrastructure	Road infrastructure	B1 <RM2500	8.11	Very High
		B2 RM2501-RM3170	7.67	High
		B3 RM3171-RM3970	5.00	Moderate
	Public transport	B1 <RM2500	1.04	Very low
		B2 RM2501-RM3170	1.00	Very low
		B3 RM3171-RM3970	1.00	Very low
Health	Free from chronic disease	B1 <RM2500	7.33	High
		B2 RM2501-RM3170	8.67	Very High
		B3 RM3171-RM3970	7.05	High
	Health facilities	B1 <RM2500	5.98	Moderate
		B2 RM2501-RM3170	6.00	Moderate
		B3 RM3171-RM3970	5.00	Moderate
Education	Have a formal education	B1 <RM2500	5.02	Moderate
		B2 RM2501-RM3170	6.00	Moderate
		B3 RM3171-RM3970	6.67	High
	Accessibility to education	B1 <RM2500	6.43	High
		B2 RM2501-RM3170	9.00	Very High
		B3 RM3171-RM3970	6.00	Moderate
Possession	Electronic items	B1 <RM2500	6.20	High
		B2 RM2501-RM3170	7.00	High
		B3 RM3171-RM3970	8.00	Very High
	Own transportation	B1 <RM2500	5.67	Moderate
		B2 RM2501-RM3170	7.67	High
		B3 RM3171-RM3970	8.00	High

4.1. Economic Transformation

The study results show that the level of satisfaction in supporting the family in income classification shows that a group of B3 RM3171-RM3970 (average: 9.00 / very high level) has the highest average amount of level satisfaction, followed by a group of B2 RM 2501 to RM 3170 (average: 6.33 / high level) and the B3 RM 2500 & below group (average: 5.80 / moderate level). In stable job is also moderate, with an average of 5.84. Income classification shows that a group of B3 RM3171-RM3970 (average: 9.00 /very high level) has the highest average amount of level satisfaction, followed by a group of B2 RM 2501 to RM 3170 (average: 6.78 / Moderate level) and the B3 RM 2500 & below group (average: 5.59 / moderate level).

In Kampung OA Simpang Arang, 70% of the aboriginal people generate their income by working in the fisheries sector, earning between RM800 to RM1200 per month. Out of the village's population, 300 individuals possess fisherman's licenses. However, the community is facing challenges due to a decline in sea produce catch caused by the impact of sea reclamation for high-impact development projects, which occur at a distance of 12km from the village. In addition to the fisheries sector, some aboriginal people in the village are employed in the manufacturing field, particularly in factories located in Gelang Patah and Tanjung Pelepas. Approximately 85% of manufacturing workers hold permanent positions, earning between RM1700 to RM2800 per month. This indicates that the development in the village area has brought about an improvement in the community's income and a shift in the economic sector from fisheries to manufacturing.

During the interview session with Tok Batin, it was revealed that the traditional source of income from collecting forest products has significantly declined due to deforestation for development purposes. The household expenditure of 90% of the respondents ranges from RM700 to RM1500 per month,

encompassing expenses for car, motorcycle, electricity and water bills, food, and children's schooling. Additionally, 96% of the respondents are under the B40 household income category.

4.2. Migration of Aboriginal people

The results of the study show level of satisfaction in the migration of aboriginal people to other place is group of B2 RM 2501 to RM 3170 (average: 9.25 / very high level) has the highest average amount of level satisfaction, followed by a group of B3 RM3171-RM3970 (average: 8.75 / very high level) and the B1 RM 2500 & below group (average: 8.91 / very high level). The level of satisfaction is very high because the village experiences a low migration rate, as only 3 out of the 50 respondents have family members who migrated. The migrations occur due to family members marrying individuals from other Aboriginal villages, such as Kampung OA Telok Jawa and Kampung OA Kuala Masai. Some individuals also migrate to Selangor and Kuala Lumpur for job opportunities. The village's strategic location offers favourable job prospects for the youth, enabling them to work nearby instead of seeking employment outside of Johor Bahru.

4.3. Cultural Transformation

The results of the study show level of satisfaction with the involvement of aboriginal people in culture are group of B3 RM3171-RM3970 (average: 9.00/ very high level) has the highest average amount of level satisfaction, followed by a group of B1 RM 2500 & below group (average: 5.09 / Moderate level) and the group of B2 RM 2501 to RM 3170 (average: 3.33 / low level). Based on the analysis, 92% of the community actively participates in cultural activities, with an average of 2 activities per year. These activities include wearing traditional clothing, exhibiting traditional hunting tools, traditional wedding ceremonies, and enjoying cultural music like kompang and kugiran. This clearly shows that despite the impact of development, the culture remains resilient and intact.

4.4. Infrastructure Transformation

The results of the study show level of satisfaction with road infrastructure are group of the B1 RM 2500 & below group (average: 8.11 / very high level) has the highest average amount of level satisfaction, followed by a group of B2 RM 2501 to RM 3170 (average: 7.67 / high level) and the B3 RM3171-RM3970 (average: 5.00 / moderate level). This is due to all of the houses having access to paved roads. However, there are complaints about the main road to the village being small. The accessibility to the village is high because of the development of new roads for Forest City.

Public transport is shows that a group of B1 RM 2500 & below group (average: 1.04 / very low level). has the highest average amount of level satisfaction, followed by a group of B2 RM 2501 to RM 3170 (average: 1.00 / very low level) and B3 RM3171-RM3970 (average: 1.00 /very low level) The level of satisfaction is very low because of no public transport available in the village. However, there are taxis, and Grab can access the village, but all of the respondents using own transportation to get the services.

4.5. Health Transformation

The results of the study show level of satisfaction in low chronic disease in the family member are group of B2 RM 2501 to RM 3170 (average: 8.67 / very high level) has the highest average amount of level satisfaction, followed by a group of B1 RM 2500 & below group (average: 7.33 / high level) and the B3 RM3171-RM3970 (average: 7.05 / high level). Some diseases exist among the native people, which are diabetes, high blood pressure, thyroid and gout.

In health, facilities are shows that a group of B2 2501 to RM 3170 (average: 6.00 / moderate level) has the highest average amount of level satisfaction, followed by a group of B1 RM 2500 & below group (average: 5.98 / moderate level) and the B3 RM3171-RM3970 (average: 5.00 /moderate level). The nearest health clinic, Klinik Kesihatan Gelang Patah, is 6km from the village. However, a mobile clinic visits the village every two weeks to provide healthcare services. The common health problems reported by the respondent are diabetes and high blood pressure.

4.6. Education Transformation

The results of the study show level of family satisfaction received formal education is group of B3 RM3171-RM3970 (average: 6.67 / high level) has the highest average amount of level satisfaction, followed by a group of B2 RM 2501 to RM 3170 (average: 6.00 / moderate level) and the B3 RM 2500 & below group (average: 5.02 / moderate level). Among the Aboriginal households, 72% have achieved secondary school education, the highest level most attained. While some young individuals choose not to continue their studies after completing primary education, there are encouraging advancements in certain communities, with residents pursuing higher education through diploma and bachelor's degree programs. One community member who successfully pursued higher studies at Queen's University Belfast in the United Kingdom is particularly impressive, highlighting the community's progress in formal education.

Accessibility to education facilities is also group of B2 RM 2501 to RM 3170 (average: 9.00 / very high level). Has the highest average amount of level satisfaction, followed by a group of B3 RM3171-RM3970 (average: 6.43 /high level) and B1 RM 2500 & below group (average: 6.00 / moderate level). The nearest primary school, SK Ladang Pendas, is located 5km away from the village, while the closest secondary school is SMK Gelang Patah which is 7km away. To cater to the educational needs of the children, there is a Tabika Kemas Orang Asli in the village, providing early education opportunities.

4.7. Possession Transformation

The results of the study show level of satisfaction in possession of electronic items are group of B3 RM3171-RM3970 (average: 8.00 / very high level) has the highest average amount level of satisfaction followed by a group of B2 RM 2501 to RM 3170 (average: 7.00 / high level) and the B1 RM 2500 & below group (average: 6.20 / high level). The research indicates that the Aboriginal community uses modern home appliances like washing machines, televisions, and refrigerators; some even have air conditioners (4% of respondents). This shows that they are becoming more dependent on these electrical devices and moving away from traditional living and cooking. Furthermore, there has been an improvement in the usage of smartphones among the Aboriginal people, with 76% of the respondents owning one. Additionally, 6% of households have access to UNIFI, which signifies the increasing acceptance of Internet facilities within the community. Despite the small number, this development indicates the Aboriginal people's embrace of ICT services, representing progress in community development regarding technology usage.

In own transportation is shows that a group of B3 RM3171-RM3970 (average: 8.00 / high level) has the highest average amount of level satisfaction, followed by a group of B2 RM 2501 to RM 3170 (average: 7.67 / high level) and the B3 RM 2500 & below group (average: 5.67 / moderate level). 78% of the respondents have a car as a means of transportation. This shows that Aboriginal people still do not have a car. Moreover, on average, all respondents have a motorcycle, 1 to 3 per household.

5. Conclusion

In Conclusion, the prevailing wave of modernization is steadily impacting the Aboriginal community, influencing their lives indirectly as the country develops. Items that were once considered unnecessary have now become essential possessions, aligning with the current developments in society (Rosnon, 2019). This research primarily focuses on examining the impact of economic, migration, culture, education, infrastructure, health, and possession in the context of the development of Iskandar Malaysia on Kampung OA Simpang Arang. The findings reveal both positive and negative effects of development [31]. It is crucial to consider the negative impacts on future development planning. Moreover, all development initiatives must prioritize recognizing and supporting the unique needs and aspirations of minority groups, particularly the Aboriginal people. Moreover, to promote inclusive and equitable growth for everyone. By doing so, we can foster a more balanced and sustainable society that benefits all members of the community [32].

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