# REGIONAL TYPOLOGY ANALYSIS AND POTENTIAL BUSINESS FIELDS IN MALUKU PROVINCE

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**ABSTRACT:** Decentralization necessitates the provincial government to maximize its potential to increase regional revenues. This study aims to categorize regencies and cities in a developing province, i.e., Maluku, based on economic growth and the Human Development Index (HDI) and thus identify potential and non-potential business fields. This study collected secondary data in economic growth data, Human Development Index (HDI), and Gross Regional Domestic Product (GRDP) From 2013 to 2017 and is analyzed by the *Klassen* Typology method. The results show that Ambon City is classified as a developed region with potential business fields in Maluku Province, including agriculture, forestry and fishery, construction, and wholesale and retail trade. The results provide a detailed description of the potential development of the business sector and will serve as a guideline for stakeholders.

**Keywords***:* Regional Typology; Potential Business Field; Klassen Tipology; HDI; GRDP

## INTRODUCTION

Regional development activities are intended to disperse and distribute the region's development to harmonize, balance, and integrate all activities(Madureira & Torre, 2019; Mindlin et al., 2016). Development must be tailored to each region's conditions and potential, and development planning across categories must be well coordinated to achieve regional development success through economic development. Natural resources, human resources, financial resources, and other resources are common problems most regions face; overcoming these means moving a region's entire economy (Havranek et al., 2016; Zallé, 2019).

The presence of Law No. 22 of 1999 concerning Regional Government and Law No. 25 of 1999 concerning Financial Balance between the Central Government and Regional Governments, which were later revised to become Law No. 32 of 2004 and Law No. 33 of 2004 respectively, have created a process of democratization for regions as decision-makers and explorers of their sources of income. In the current era of regional autonomy, each region has the freedom to determine the direction and policies of its regional economic development. Information on the region's economic potential is required to determine the direction and economic development policies in one area. The economic potential can be determined by identifying the advantages and disadvantages of the region's various economic categories and subcategories (Figueiredo & Paiva, 2019; Ribeiro et al., 2018). Economic categories in a region with leading business fields have better prospects for development and are expected to encourage the development of other economic categories (Ghisellini et al., 2016).

Nowadays, the government plays a role in implementing central government policies and plays a role in determining regional policies (Shen et al., 2017). The determined policies do not have to be the same as national or other regional policies due to the state of the national economy or other regions (Aparicio et al., 2016; Galindo & Méndez, 2014). In other words, the policy must be based on the conditions and situation of the region. Economic growth in each region varies significantly due to differences in the structure and economic potential of the regions (Liu & Zhang, 2020). Some regions are experiencing rapid economic growth, whereas others are experiencing slow or even stagnant growth. These circumstances will undoubtedly impact the level of prosperity of the people in each region; some have evolved into developed regions, others into developing regions, and still, others remain relatively backward.

To be more precise and focused in developing regional development policies and programs, differences in the structure and conditions of regional economic development must be carefully examined (Schwerdtner et al., 2015). Policies and programs for fast-growing regions will almost certainly differ from those for slow-growing regions. As a result, the classification of regions based on their growth structure and level of development will be critical as a foundation for developing regional development policies and programs (Yu & Jackson, 2011). In addition, studies are also needed to analyze the potential

economic categories that exist in Maluku province to increase the regional income. Based on these problems, this study aims to classify regencies and cities based on economic growth and the Human Development Index (HDI) in Maluku Province and identify potential business fields that must be developed as the economic non-potential business motor in Maluku Province. The Klassen typology grouped regions based on two characteristics possessed by the region, namely GRDP per capita and growth rate. In this study the Klassen typology was carried out using the Human Development Index data and the GDP growth rate. The development paradigm that is currently developing is economic growth, one of which is measured by human development as seen by the level of quality of human life. One of the benchmarks used in viewing the quality of human resources is the Human Development Index (IPM). If the two indicators are combined into one unidirectional development policy, it will create a force that can encourage each other, so that economic growth will be very effective in improving human development.

## THEORETICAL REVIEW

### Regional Theory

Geographically, the area is a homogeneous unity with its people and culture, with distinct characteristics. The development area is a territory set aside for development purposes (Chen et al., 2021). The development objectives are linked to five keywords: growth, strengthening ties, balance, independence, and sustainability. The spatial concept can be seen in several ways, including area, distance, location, scale, and the threshold or range of services (Kim & Lee, 2014).

### Theory of Growth Center (Growth Pole Theory)

The growth center can be interpreted in two ways, namely functionally and geographically (M. Coe, 2014; Wijaya et al., 2020). Functionally, the center of growth is the location of a business group's concentration or branches of industry. Due to the nature of the relationship, it has dynamic elements and can stimulate economic life both inside and outside (it) (Amos, 1990; Hansent, 1975). Geographically, the center of growth is a location with many facilities that become a center of attraction (pole of attraction), which attracts various kinds of businesses to establish their business there. People like to come to take advantage of the existing facilities in the city, even though they may not be an interaction between these businesses (Agustina et al., 2021; Parr, 1973).

### Regional Economic Growth Theory

The primary goal of the regional economic growth analysis is to explain why some areas overgrow while others grow slowly (Gennaioli et al., 2013; Henderson et al., 2012). In Indonesia's regional autonomy era, there has been a greater emphasis on regional economic growth (Temenggung et al., 2020). It is

because, in this era, each region competes to increase its economic growth in order to promote local community prosperity. As a result, discussing the structure and determinants of regional economic growth will be critical for regional governments in determining policies and efforts to promote economic growth in their respective regions.

*Regional Potential Sector*

Potential is something that already exists but has not yet been realized. Specific efforts are required to obtain such potential; for example, exploration and exploitation are required for natural resource mining potential, and taxation is required for tax potential. Because the potential is still hidden, it is necessary to investigate the size of the existing income potential.

Economic potential is the economic capability within a region that can be developed to continue to develop as a source of livelihood for the local people and even support the entire regional economy to develop on its own and become sustainable (Ascani et al., 2012). Different demographic, economic, sociological, cultural, geomorphological, and environmental factors influence income potential in different regions(Mazur & Tomashuk, 2020). External economic developments, such as regional and global economic developments, can also impact the growth of national and regional economic potential. However, sometimes potential cannot be realized due to a lack of human resources, capital, or limiting legislation.

*Regional Comparative Advantages and Competitive Advantages*

Regional economic excellence generally comprises comparative advantage and competitive advantage (competitiveness). A region's economy is specialized when a region prioritizes the development of an economic category through policies that promote the advancement of that category (McCann & Ortega-Argilés, 2015). These priority categories can be developed through investment and increased human resources (Ranis et al., 2000). Economic specialization is necessary for a region's economic growth to accelerate. If a region specializes in a specific category, that region will have a competitive advantage due to that category's specialization.

Competitive advantage receives more attention than a comparative advantage in the free trade era. A region's "competitive advantage" demonstrates its ability to market its products outside its borders. Competitive advantage is defined in regional economic analysis as the ability of a region's economic activity to compete against the same economic activity in another area. A competitive advantage reflects one region's economic growth superiority over another region used as a benchmark over time. If a category has a comparative advantage due to its high potential, the policy prioritized for economic development may have implications for creating a competitive advantage. Economic activities with comparative and competitive advantages will significantly benefit a region's economy.

**METHODOLOGY**

Secondary data from Indonesia Statistics (BPS) spanning the years 2016 to 2020 was used in this analysis. Data on growth rates for the province's 11 regencies/cities, human development index (HDI) data for the province's 11 regencies/cities, and GRDP data based on business field in 2010 constant prices in Maluku Province. The Klassen Typology Matrix was used in this study to group regions based on their growth structure and level of development. Regional grouping was accomplished by using two primary indicators: the rate of economic growth and the Human Development Index (HDI). As a result, there are four regional groups (Iqbal et al., 2020): (1) A developed region in quadrant I with above-average growth and HDI; (2) Developed but Depressed Regions (in quadrant II), in which the regional HDI is higher than the national average, relative to the low rate of economic growth; (3) The developing area in quadrant III where the HDI is lower than average but the regional economic growth is higher than average. (4) Relatively backward regions in quadrant IV where the economic growth rate and the HDI are lower than the national average. Table 1 explains which region or area falls into the developed, developing, developed but depressed, and relatively backward regions (Katti et al., 2019).

Table 1. Regional Categories Base on Klassen's Typology

| Growth Rate PDRB / IPM | Growth Rate Above Average | Growth Rate Above Average |
|---|---|---|
| IPM Above average | Developed Regions/ Main Regions | Underdeveloped regions |
| IPM Below Average | Developing Regions | Relatively Backward Regions |

Sectors/leading business sectors (prime) contribute the most to the regional economy. A business field is classified as a prime or prime business field if it overgrows and contributes significantly to the regional economy. In contrast, potential business fields contribute significantly to the regional economy but grow slowly and decline. Relatively backward regions' business fields have become a regional weakness due to slow growth and low contribution to GRDP.The calculation rate of the business fields' contribution growth and the business fields' average contribution to GRDP, as shown in Table 2, determines what is in the category of leading, potential, developing, and relatively backward regions (Saerang et al., 2019):

Table 2. Business Fields Categories Based on Klassen's Typology

| Business Fields Average Contribution Towards PDRB ⟍ Business Fields Growth Rate Average | $\hat{Y}_{business\ fields} \geq \hat{Y}_{PDRB}$ | $\hat{Y}_{business\ fields} < \hat{Y}_{PDRB}$ |
|---|---|---|
| $r_{business\ fields} \geq r_{PDRB}$ | Leading Business Fields | Developing Business Fields |
| $r_{business\ fields} < r_{PDRB}$ | Potential Business Fields | Relatively Backward Business Fields |

Information:

$\hat{Y}_{business\ fields}$ = business fields average i

$\hat{Y}_{PDRB}$ = PDRB average

$r_{business\ fields}$ = business fields growth rate i

$r_{PDRB}$ = PDRB growth rate

## RESULTS

*Regional Typology Analysis*

Based on the data presented in Table 3, the average economic growth rate of Maluku Province from 2013 to 2017 was 5.78%. Southwest Maluku Regency and South Buru Regency have relatively high economic growth rates, 6.64% and 6.11%, respectively. Economic growth in other districts in Maluku Province ranges from 5.14% to 5.91%. Ambon City has the highest average HDI in Maluku, while Southwest Maluku Regency has the lowest, 58.73.

Table 3. EGR and HDI per the Regencies and Cities in Maluku 2016 to 2020

| Cities and Regencies | EGR (%) | Avg. HDI |
|---|---|---|
| West South-East Maluku | 5,91 | 60,43 |
| South East Maluku | 5,85 | 63,47 |
| Central Maluku | 5,62 | 69,01 |
| Buru | 5,52 | 65,89 |
| Aru Islands | 5,82 | 60,55 |
| Western Seram | 5,58 | 63,06 |
| Eastern Seram | 5,14 | 60,37 |
| Southwest Maluku | 6,64 | 58,73 |
| South Buru | 6,11 | 61,41 |
| Ambon City | 5,96 | 79,18 |
| Tual City | 5,88 | 65,24 |
| **Provincial Average** | **5,78** | **67,13** |

Source: Secondary Data Processing

Decentralization necessitates the provincial government to maximize its potential to increase regional revenues. This study aims to categorize regencies

and cities in a developing province, i.e., Maluku, based on economic growth and the Human Development Index (HDI) and thus identify potential and non-potential business fields. This study collected secondary data in economic growth data, Human Development Index (HDI), and Gross Regional Domestic Product (GRDP) From 2013 to 2017 and is analyzed by the *Klassen Tipology* method. The results show that Ambon City is classified as a developed region with potential business fields in Maluku Province, including agriculture, forestry and fishery, construction, and wholesale and retail trade. The results provide a detailed description of the potential development of the business sector and will serve as a guideline for stakeholders. Based on Klassen's Typology Matrix, Ambon City is one of Maluku Province's Developed Regions. Ambon City was chosen as a developed area because it is the capital of Maluku Province, where modern sectors dominate regional economic activities and generally have higher productivity levels. As a developed region, Ambon City had a higher rate of economic growth and HDI than Maluku Province and the highest Human Development Index at 79.18. This is higher than the average economic growth of Maluku Province (5.96).

Table 4. Klassen's Typology of Regions in Maluku Province

| PDRB Growth Rate Human Development Index | Above Average Growth Rate | Below Average Growth Rate |
|---|---|---|
| Above Average IPM | **Developed Region:** - Ambon | **Retarded Region:** - Central Maluku |
| Below Average IPM | **Developing Regions:** - West South-East Maluku - South-East Maluku - Aru Islands - Tual | **Relatively Backward Regions:** - Buru - Western Seram - Eastern Seram - Southwest Maluku - South Buru |

Source: Secondary Data Processing

West Southeast Maluku Regency, Southeast Maluku Regency, Aru Islands Regency, and Tual City are classified as Developing Regions in Maluku Province. The Central Maluku Regency is one of the Retarded Regions' regencies and cities. Buru Regency, West Seram Regency, Southwest Maluku Regency, and South Buru Regency are the next regencies and cities in the Relatively Backward Region.

When this technique is used to develop regional development policies and programs, the Klassen, as mentioned earlier, Typology Matrix will provide significant benefits for regional development planning preparation. Possible actions include:

1. Regional development policies and programs in developed regions should be directed more toward business fields, modern economic activities, and capital-intensive technologies such as industry and services. As a result, the regional economy's productivity will increase, and the community's welfare will improve.
2. In retarded regions, development policies and programs should resolve problems that impede regional economic growth, such as declining the price of regionally leading commodities in the international market. Some policies that can be implemented include marketing the region's leading products in other regions or replacing leading regional commodities.
3. In developing regions, the formulation of regional development policies and programs should aim to encourage regional economic growth by utilizing the region's economic potential. Furthermore, efforts must be made to accelerate the entry of capital and skilled labor to boost regional competitiveness.
4. In relatively backward regions, efforts should be made to increase employment opportunities through labor-intensive technology to formulate regional development policies and programs. The main economic activities should be agricultural activities that still use simple technology but produce products with a relatively large market, such as food crop commodities. Furthermore, to drive economic growth, a policy that provides incentives for the inclusion of investment activities in this relatively backward region is required. The incentive is an increase in infrastructure facilities, which will help reduce infrastructure scarcity, impeding the pace of investment in the region.

*Analysis of Potential Business Fields*

Furthermore, the Klassen Typology analysis results determine potential business fields or business fields that can still be reoptimized in Maluku Province. Agriculture, forestry and fisheries, construction business fields, and wholesale and retail trade businesses are some of the potential business fields in Maluku Province. Whereas the only three leading fields of business are government administration, defense, and social security. Maluku province is developing business fields that include 1) mining and quarrying; 2) processing industries; 3) electricity and gas procurement; 4) transportation and warehousing; 5) information and communication; 6) financial and insurance services, and 7) educational services. The following are the categories of underdeveloped business fields: 1) water supply, waste management, waste and reflux, 2) accommodation and food and beverage provision, 3) real estate, 4) company services, 5) health services and social activities, and 6) other services, , as shown in Table 5.

Table 5. Grouping of Business Fields by the Klassen's Tipology

| Business Fields Average Contribution towards PDRB / Business Fields Growth Rate Average | $\hat{Y}_{Business Field} \geq \hat{Y}_{PDRB}$ | $\hat{Y}_{Business Field} < \hat{Y}_{PDRB}$ |
|---|---|---|
| $r_{Business Field} \geq r_{PDRB}$ | **Leading Business Field**:<br>- Public Administration & Defence; Compulsory Social Security | **Developing Business Fields**:<br>- Mining & Quarrying<br>- Manufacturing<br>- Electricity & Gas<br>- Transportation & Storage<br>- Information &Communication<br>- Financial & Insurance Activities<br>- Education |
| $r_{Business Field} < r_{PDRB}$ | **Potential Business Fields**:<br>- Agriculture, Forestry & Fishing<br>- Construction<br>- Wholesale &Retail Trade; Repair of Motor | **Relatively Backward Business Field**:<br>- Water supply, Sewerage, Waste Management &Remediation Activities<br>- Accommodation & food Service ActivitiesReal estat<br>- Business Activities<br>- Human Health and Social Work Activities<br>- Other Service Activities |

Source: Secondary Data Processing

**DISCUSSION**

Based on the grouping of regions into four quadrants, it can be seen that the regional typology based on economic growth and HDI shows that the area included in the classification of high economic growth and HDI is Ambon City. This also strengthens the position of Ambon City in the top position in regional economic growth. Of course, there is a strong reason why Ambon City shows the best performance among other regions in Maluku for these two elements. Construction of public facilities for health and education services, coupled with the role of the private sector in providing the same facilities as private hospitals and schools (from kindergarten to high school) and private universities, and infrastructure development is indeed expected from regional

economic division (Ozoegwu & Akpan, 2021; Rahma et al., 2019; Soto-Acosta et al., 2016; Zhen et al., 2019).

In theory, regions that have high economic growth will have high HDI values (Hartmann et al., 2015; Kubiszewski et al., 2013; Lee et al., 2004; Zaman & Moemen, 2017), but this has not happened in several areas such as Southwest Maluku Regency and South Buru Regency. Although the economic growth of the two regions is high, the HDI is relatively low. This indicates that the high economic growth in the two regions has income inequality. This can be seen from the immense contribution of the Government Administration, Defense, and Mandatory Social Security business fields to forming the GRDP of these two regions. However, the employment absorption. These business fields are also the principal business fields in Maluku, as in Table 5.

The formation of Maluku's GRDP, which relies on business fields with a small level of employment, impacts the poverty rate in Maluku, which is still high. This factor is strongly suspected to be the reason the HDI in the area is low, in addition to high inflation, which causes people's purchasing power to be low (Frankel & Rose, 1996; Istiak et al., 2021; Kamada & Nakajima, 2014; Monadjemi & Lodewijks, 2021). High inflation impacts reducing people's purchasing power because it causes people's real income to decrease (Piazza, 2006; Ravallion & Chen, 2007).

An underdeveloped region like Maluku needs to increase business fields categorized as potential business fields such as Agriculture, Forestry, and Fisheries. These business fields are marked by a high level of employment and a strong position of competitiveness (Maluku Provincial Statistics Center, 2021). If these business fields can be optimized for development, it is hoped to increase HDI in both regions and Maluku in general. The high absorption of labor in the agricultural business field and as a buffer for the economy is caused by: (1) inherited activities from generation to generation; (2) does not require workers with higher education/special skills; and (3) a buffer for workers who have not found permanent work in other business fields (Guo et al., 2021; Matsuyama, 1992).

**FURTHER RESEARCH**

The findings make some suggestions for this study. Regional development policymakers in Maluku Province, including the provincial, district, and city governments, must consider the spatial dimension. Policies that can be implemented in regional development planning include: (a) for relatively underdeveloped regions, the formulation of regional development policies and programs should focus on efforts to increase employment opportunities through labor-intensive technology. The main economic activities should be agricultural activities that still use simple technology but have a relatively large market, such as food crop commodities. (b) For developing regions, the formulation of regional development policies and programs should encourage regional economic growth by utilizing the region's economic potential. The Maluku Provincial Government should prioritize its potential

business fields to accelerate regional income in its development policies. Other categories that do not fall into potential business fields must also receive regional government attention proportionally based on their potential and development opportunities to increase their value-added. This study suggests further studies to accommodate each region's inherent and unique capacities as its comparative advantage. Other endeavors may also benefit from investigating the possessed tacit and explicit knowledge in forming a more stable development.

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