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Reconstruction of Indonesia's Border Areas through Innovation

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Abstract: Morotai is a region of Indonesia that has experienced significant development progress in infrastructure. The development is undoubtedly the case with lighting at the point of the territory; road access is a portrait of the progress of Morotai Island Regency, considered a potential area for processing and preserving nature. The problem is that innovation in the sector has not been maximized. Existing innovations are still limited to building areas in terms of infrastructure, structuring public services, preparing human resources, creating communication media, and collaboration. This research aims to create an exit strategy for border area development through innovation through a border area development model using existing natural resources. The novelty of this paper is that using the dynamic location quotient method can map the potential of Morotai's natural resources as opportunities for innovation. The research used this method with respondents from Balitbangda state civil apparatus and ten focus group discussion participants. The findings are as follows. (1) Morotai still has not maximized the results of research on innovation; (2) the results of fisheries, agriculture, and forestry cultivation could not highlight the characteristics of the region. The results of research on the stages of regional development need analysis, planning, implementation, evaluation, and follow-up. The emphasis is on tourism development, seafood cultivation, regional potential development, shrimp cultivation, and the creation of electricity systems.

Keywords: building, innovation, region, dynamic location quotient.

通过创新重建印度尼西亚边境地区

摘要：莫羅泰是印度尼西亞的一個地區，在基礎設施方面取得了顯著的發展進步。領地照明的無疑是這樣發展的；道路通道是摩羅泰島攝政進步的寫照，被認為是加工和保護自然的潛在區域。問題在於該部門的創新尚未最大化。現有的創新仍然局限於基礎設施建設、構建公共服務、準備人力資源、創建通信媒體和協作方面。本研究旨在通過利用現有自然資源的邊境地區發展模式創新，為邊境地區發展制定退出戰略。本文的新穎之處在於，使用動態區位商法可以將莫羅泰自然資源的潛力映射為創新機會。該研究對來自巴利邦達州民用機構的受訪者和十名焦點小組討論參與者使用了這種方法。調查結果如下。(1) 莫羅泰仍未將創

新研究成果最大化；(2) 漁業、農業、林業種植成果不能突出區域特色。區域發展階段研究成果需要分析、規劃、實施、評價和跟進。重點是旅遊業發展、海鮮養殖、區域潛力開發、蝦類養殖和電力系統建設。

关键词：建築、創新、區域、動態區位商數。

1. Introduction

Morotai Island Regency has a growth rate of 62.50 in 2021. Human development in North Maluku in 2020 decreased compared with that in 2019. In 2020, the HDI of North Maluku reached 68.49, down 0.21 points compared to 2019, which was 68.70. The decrease in the HDI of North Maluku occurred in the adjusted per capita expenditure component. Babies born in 2020 have a hope of being able to live up to 68.33 years. Children who were 7 years old in 2020 hoped to enjoy 13.67 years of education (Diploma II).

Meanwhile, residents aged 25 and older received an average of 9.04 years of education (grade IX). The people of North Maluku in 2020 met the needs of life with an average per capita expenditure of 8.03 million rupiahs per year. The decline in HDI in North Maluku occurred in almost all regions except for East Halmahera Regency and Morotai Island Regency. Ternate City occupies the highest HDI (79.82), while Taliabu Island District still occupies the lowest HDI (60.48). The complex problems faced by Morotai demand solutions to overcome development problems. The acceleration of regional economic development goes through regional development.

Increasing HDI and alleviating problems became strategic issues in Morotai. One solution to this problem is to intensify the innovation. Moreover,

Regent Regulation 17 of 2019 requires one regional device to produce one innovation. Thus, the OPD in Morotai Island Regency provides ideas and outputs ideas related to its innovation. In addition, the problem of Morotai Island lies in the poverty line of 6.46%, open unemployment of 36.27%, and GRDP of 1 648 119.99 billion. The district is innovative, with many awards recognizing Morotai's innovative courage. In assessing the Innovative Government Award, the Ministry of Home Affairs gave Morotai the award as the first winner of the most innovative border area and the 3rd place for the development of disadvantaged areas. Even Morotai Island also won an award as 2nd place for an innovative district applying infrastructure technology for development and equity from the Ministry of Public Works and Public Housing, such as the application of waterfront City technology, Talud buho, Tiley irrigation and the Healthy Kitchen Program [12]. This award certainly means a lot to us as a young area located in the border area.

Morotai Island County became part of the border area with all limitations. The development problems faced by Morotai should mobilize solutions to reduce the turmoil of problems in the area. One of them is through regional innovation. Morotai implicitly demonstrates its innovation achievements in a few years (Fig. 1).

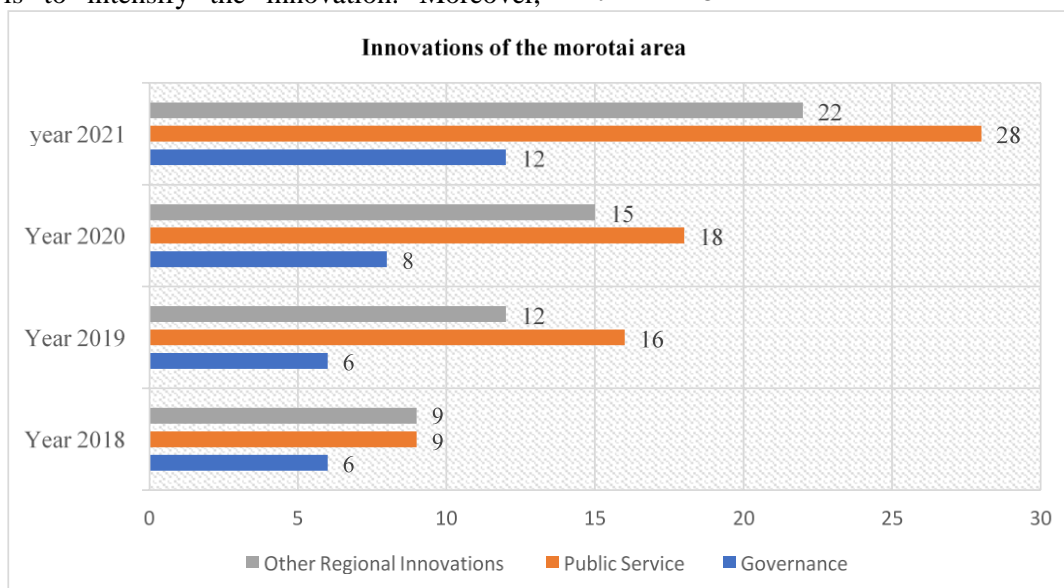


Fig. 1 Innovation achievements of Morotai

Public services dominate the innovation movement every year. Moreover, Morotai is famous for its

services that provide free of charge to the surrounding community. Free electricity at home, education, and

health are free of charge. All regional innovations carried out by Morotai are inseparable from several fields of development [9].

Good public services indicate the fulfillment of a responsive local government attitude. Local governments have the right to maximize local assets, optimize resource potential, and regulate directing their regional growth rate. However, this authority delegates central government authority to local governments. The programs devolved to the regions are large in the field of innovation. The demands of adjusting to the innovation ecosystem are in the modernization era, of course, with regional arrangements as the spearhead of innovation implementation [2]. This means that innovation is not one-sided, but regulation by local governments is an important point. [13] emphasizes the ability of critical regions, especially for the affairs under which they are authorized.

Building border areas through innovation is not eliminating development programs recorded in the Strategic Plan or Regional Medium-Term Development Plan (RPJMD). This flexibility means that regional autonomy acts according to one's desires based on aspirations. Both potential areas are rich in development opportunities, which should be noticed. Third, regions have creative ideas that need to be given incentives to bring out their abilities. Fourth, there are many fertile regions with a significant increase in PAD, good HDI, and trusted regional head performance, so it should be given more authority to make it a good social capital in using regional potential.

Economic growth on Morotai Island has opportunities in developing border areas because this region has an essential authorized capital in developing border areas, namely cultural elements, institutional frameworks, private sector interests, infrastructure, policies, and investment approaches [3]. The obstacle to border development in this economic perspective is the role of policies and infrastructure that still need to support the development of border areas.

Realizing the indigenous improvement of the region and the excellent human development index on Morotai Island prove realizing relatively good economic growth as [5] argues that economic growth is a long-term increase in a country's ability to provide more and more economic goods to its population. This ability grows following technological advances and the institutional and ideological adjustments it requires. This definition has three components:

1. The economic growth of a nation is evident from the continuous increase in the supply of goods;
2. Advanced technology is a factor in economic growth that determines the degree of growth in providing various goods to the population;
3. The widespread and efficient use of technology requires adjustments in institutions and ideologies so that human science can use innovations appropriately.

From the description above, coherence relates to

regional innovation as an element that bridges the achievement of increasing GRDP, economic growth, and improving human quality to achieve competitiveness. Strengthened by [15, p. 247], stunted innovation can cause welfare not to increase. Therefore, strengthening regional innovation can start by analyzing the HDI, GRDP, growth rate, and results of the regional innovation index. With this knowledge, it will make it easier for TIMs to formulate strategies to compile regional innovation coaching models following regional typologies.

Innovation not only has a positive effect but also provides an opportunity for people to play an active role in terms of expressing opinions that have become something of value. In practice, Morotai provides easy access to complaints and a pro-government attitude toward the government's innovation policy. Public services carried out by Morotai are mostly excellent, and people declare public services in Morotai unpaid or free. Starting from Education and Health, access to services in government is free of charge. The BPS survey showed North Maluku as the province with the highest score by looking at three indicators, namely personal and social life satisfaction, feelings, and eating life. North Maluku achieved a happiness index in the life satisfaction category of 75.16, above the national average of 71.49. Although the GRDP scale is low, Indonesia's North Maluku happiness index is high.

Building the border area is indeed a common task. Morotai is a Special Economic Zone area following Law Number 39 of 2009 concerning Special Economic Zones and Government Regulation No. 50 of 2014, whose position is on the outer island adjacent to ASEAN and East Asian countries. Morotai Island Regency, with its nautical advantages, can become a data attraction for tourists who love history. Morotai's current projections could attract investors and employment 30,000 in 2025, according to National Council, strengthened by studies that state that economic opportunities arise due to the use of resources in adjacent areas and their spatial proximity [6].

Some of the things done in improving the development and infrastructure in Morotai are: Firstly, the acquisition of 300 ha of land, second the improvement of road access to the Daruba and Wayabula port bridges, third the construction of the airport, Pitu Morotai, and fourthly the construction of access from the area to the airport. The potential that must meet the development of innovation is to increase tourist visits to Morotai, provide street lighting to points that experience darkness, and others.

Thus, this study aims to create an exit strategy for developing border areas through innovation. This study is unique because it raises the phenomenon of innovation that can drive development in Morotai. Existing regional innovations are also part of proving local government performance improvement by

looking at the achievement of the Morotai Island regional innovation index score. Based on the 2018-2022 regional innovation indexes, Morotai achieved the following innovation categories (Table 1).

Table 1 Morotai innovation achievements on the regional innovation index (Ministry of Home Affairs, 2018-2021)

| Year | Index category | Score | National ranking |
|------|-------------------|-------|------------------|
| 2018 | Highly innovative | 3120 | 20 |
| 2019 | Highly innovative | 7040 | 41 |
| 2020 | Highly innovative | 3020 | 56 |
| 2021 | Innovative | 59.51 | 20 |
| 2022 | Innovative | 39.57 | 261 |

The regional innovation index achieved by Morotai gave an award in the form of a regional incentive fund obtained in 2020 of IDR 2,230,496,000. The funds are allocated for the construction of the territory in Morotai District. The incentive fund provides capital for the full development of the region through Morotai innovation. Therefore, building the Morotai Area creates a climate of innovation by raising local potential and resource use.

2. Research Methodology

This study uses a descriptive-analytical method, meaning that this study is to describe or gives an overview of the object under study through data or samples collected without analyzing and making conclusions that apply to the public. This study looks at the development of the sector's potential from 2013 to 2017. The assumption is that observing the development every year will reflect economic growth as a manifestation of people's welfare.

This study allocates time 1 a month and the locus of study is Morotai Island Regency. Morotai Island District was chosen as one of the representative districts as representatives of border and disadvantaged areas. Morotai Island District is an innovative area based on the 2018 regional innovation index data. Therefore, the success of the Morotai Island district in performing regional innovations, with its 22 regional innovations, provides achievements that can be an inspiration for other regions. In addition, the growth rate in 2017 was 6.37%, the Human Development Index in 2017 ranked 9th in North Maluku with an index value of 60.71, and the GRDP was 1,319,055.80.

The selection of Morotai's research objects was motivated by (1) excellent natural potential and easy growth, (2) Morotai received an innovation award from the Ministry of Home Affairs related to its innovation development, and (3) Morotai, although it has an innovation award, has not been able to raise its innovation characteristics by the advantages of the region.

The respondents were in Morotai Island Regency, especially Balitbangda, and a Focus Group Discussion of 10 people using in-depth interviews. The data collection technique includes observation, interviews,

and documentation tracing through secondary data sourced from

- The Central Statistics Agency (BPS), Government Regulation of the Republic of Indonesia Number 12 of 2017 concerning guidance and supervision of local government implementation;
- Law Number 43 of 2008 concerning state territory;
- Presidential Regulation No. 131 of 2015 concerning the determination of disadvantaged areas;
- Collection of books and documentation through internet sites.

Data analysis in this study is qualitative and quantitative. Qualitative data analysis using data triangulation is obtained through:

1. Analyzing data through a collection of documentation obtained;
2. Analyzing the results of interviews with innovation actors;
3. Analyzing data based on observations in the field.

Meanwhile, the quantitative analysis uses the Dynamic Location Quotient (DLQ), which refers to BPS data related to the economic growth of Morotai Island Regency, with the following formula:

$$LQ = \frac{xi / PDRBi}{Xi / PDRBI}$$

where:

- Xi - value-added sector in narrower regions;
- PDRBi - gross regional domestic product of narrower regions;
- Xi - value added sector provincially or nationally;
- PDRBI - gross regional domestic product by province or national 48 from the calculation.

Conclusions on LQ are as follows:

1. If the LQ value > 1, then the sector is the base sector. It not only meets the needs within the regions but also the needs outside the regions because of this sector for development.
2. If the LQ value = 1, then the sector is only enough to meet the needs in the area.
3. If the LQ value is < 1, then the sector is a non-base sector and needs to import products from outside the region because this sector is less promising for development.

For the analysis of basic needs in 2018, the standard analysis of performance indicator achievements (PIA) uses the formula:

$$PIA = (Realization/Target) \times 100\%$$

Table 2 assesses the achievements of the formula above.

Table 2 Categorized innovation

| No. | The number of values | Category |
|-----|----------------------|-----------------|
| 1 | More than 100% | Very successful |
| 2 | 85% s/d 100% | Succeed |
| 3 | 70% s/d 84% | Enough |
| 4 | Less than 69% | Less |

The flow of these research stages is in Fig. 2.

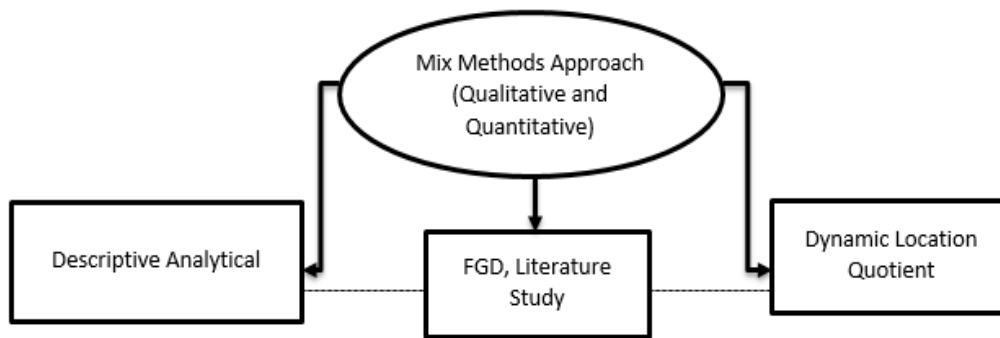


Fig. 2 Methodology

The limitation of this research is that it could not present innovative products that follow the characteristics of the Morotai region. The authors could only show the potential of natural resources that can apply as innovation, especially the policy of developing innovation based on regional excellence.

3. Results and Discussion

Full support is also created in organizing innovation as an entry point for development change, just as Morotai creates innovations to solve society's problems. The description is in Table 3.

Table 3 Sector potential calculation for dynamic location quotient analysis 2013-2017 [11]

| Business Field | Economic Sector Potential of Morotai Island Year 2013-2017 | | | | | Sum | Average | Information |
|---|--|-------|-------|-------|-------|-------|---------|------------------------------|
| | 2013 | 2014 | 2015 | 2016 | 2017 | | | |
| | Agriculture, Forestry and Fisheries | 49.70 | 48.84 | 47.32 | 47.48 | | | |
| Mining and Quarrying | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.25 | 0.05 | Slower Development Potential |
| Processing Industry | 5.28 | 5.21 | 5.11 | 4.86 | 4.64 | 25.1 | 5.02 | Slower Development Potential |
| Electricity and Gas Procurement | 0.03 | 0.04 | 0.05 | 0.08 | 0.09 | 0.29 | 0.058 | Slower Development Potential |
| Water Procurement, Waste Management, and Recycling | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.05 | 0.01 | Slower Development Potential |
| Construction | 7.25 | 7.46 | 7.80 | 7.97 | 8.23 | 38.71 | 7.742 | Slower Development Potential |
| Large Trade and Retail; Car and Motorcycle Repair | 18.22 | 18.71 | 19.46 | 19.43 | 19.62 | 95.44 | 19.088 | Slower Development Potential |
| Transportation and Warehousing | 1.90 | 1.95 | 2.06 | 2.33 | 2.44 | 10.68 | 2.136 | Slower Development Potential |
| Provision of Accommodation and Food and Drink | 0.13 | 0.14 | 0.14 | 0.14 | 0.14 | 0.69 | 0.138 | Slower Development Potential |
| Information and Communication | 1.17 | 1.16 | 1.16 | 1.14 | 1.15 | 5.78 | 1.156 | Slower Development Potential |
| Financial Services and Insurance | 1.25 | 1.29 | 1.42 | 1.47 | 1.43 | 6.86 | 1.372 | Slower Development Potential |
| Real Estate | 0.11 | 0.10 | 0.10 | 0.10 | 0.10 | 0.51 | 0.102 | Slower Development Potential |
| Company Services | 0.11 | 0.10 | 0.10 | 0.10 | 0.10 | 0.51 | 0.102 | Slower Development Potential |
| Government Administration, Defense and Compulsory Social Security | 9.39 | 9.62 | 9.90 | 9.43 | 9.26 | 47.6 | 9.52 | Slower Development Potential |
| Education Services | 3.46 | 3.35 | 3.32 | 3.32 | 3.41 | 16.86 | 3.372 | Slower Development Potential |
| Health Services and Social Activities | 1.42 | 1.47 | 1.50 | 1.55 | 1.56 | 7.5 | 1.5 | Slower Development Potential |
| Other services | 0.51 | 0.50 | 0.49 | 0.49 | 0.48 | 2.47 | 0.494 | Slower Development Potential |

Each line of development moves actively to follow the needs of the community. When problems in the community arise, innovation arises in the border area. The border area faces several problems, including tourism problems, economic infrastructure

development, using marine and fisheries potential, and others. The table described earlier emphasizes that innovations carried out by Regional Apparatus Organizations (OPD) can make a series of innovations directed at changing the paradigm of Morotai

development by cooperating with relevant stakeholders to achieve regional targets, namely community welfare. In the fourth year, from 2018-2022, Morotai reported its innovation and saw excellent progress. Morotai

emphasizes one OPD, one innovation which means that OPDs located in the Morotai Regency environment must perform innovations and try to innovate by not forgetting to leave Morotai local wisdom (Table 4).

Table 4 Successful innovation in building the Morotai area

| No. | Innovation | Achievements | Target |
|-----|---|---|---|
| 1 | Home help | Free house for teachers in Loleo Village and surrounding areas in Morotai Jaya Subdistrict | The provision of special houses for teachers amounts to 30 units (construction value of Rp 128,000,000/housing unit). |
| 2 | The Central Business District | People's market, PJKC, Puskesmas, Oikumene Building, Bus Terminal, Satpol-PP Office, Shops, Islamic Center, Miniature Kaaba, and Great Mosque | 6 people's market buildings with the prototype of the ministry of trade, intended for street vendors (PKL) who sell clothes, electronic devices, groceries, fish, and traders who sell various agricultural products. |
| 3 | Innovation in the healthcare sector is called the referral patient companion fees (BAPERAN) [4] | Providing transportation costs and meal money for patients and their families. Meanwhile, the accompanying officers are given facilities for transportation costs, accommodation, and meal fees | The realization of patient family assistance |
| 4 | Self-management construction of Tani street | It is 4.5 m wide by 182 km spread across 22 villages. | The total need for Jalan Tani is 1200 KM. The remaining 1000 KM of farm road work spread across 66 unhandled villages |
| 5 | Building or rehabilitating uninhabitable houses | The construction or rehabilitation of houses is spread throughout or 6 sub-districts | 330 housing units, estimated per house costing Rp10-15 million |
| 6 | Prosperous Morotai Card | Providing electricity and clean water, building 20 KM of roads in 2017 and 40 KM in 2018 | 2 Sub-districts, namely, Morselbar District and Rao Island. The Morotai Sejahtera Card (KMS) assistance in 2021 with a total number in these two sub-districts is 112 recipients, consisting of 53 people in Morselbar district and 59 people for Rao Island. |
| 7 | Electrical Installation | The program delivers electricity and water to houses that have not been supplied with electricity and water and to road construction with self-help system with the community | Along 20 km in 2017 and 40 km in 2018. |

Innovation dominated by public services is natural because local governments always try to increase responsiveness and openness to criticism and strategies to increase public trust. It has been proven that created innovations can always contribute to reducing development problems. Just as education innovations provide easy access to school facilities, health innovations have reduced lepers and hospitalized patients. Meanwhile, by creating innovation, every household performs food cultivation and a public road complaint post where Morotai experiences darkness.

The potential of Morotai plantations is quite broad with 2158 coconuts, 1085 nutmeg, and 607 cloves; North Morotai with 2549 coconut, 1240 nutmeg, and 746 cloves; East Morotai with 2093 coconuts, 952 nutmegs, and 603 cloves; Morotai Jaya with 2304 coconut, 1216 nutmeg, and 681 cloves; Southwest Morotai with 3227 coconut, 1376 nutmeg, and 904 cloves; Rao Island with 969 coconut, 399 nutmeg, and 315 cloves.

Plantation capital, such as agriculture and fisheries, is abundant but could be more promising. The hard work in developing Morotai is in the spotlight to further increase the yield of plantations, unlike the case with the potential of fisheries to be the main work of the Morotai community. Starting from culinary processing to fish farming is a strategic position in the

area.

Strategy and policy direction are steps to solve critical and urgent problems to be implemented immediately within five years and significantly impact achieving the vision, mission, goals, and objectives. The strategy and policy direction is also a comprehensive planning formulation of how the Morotai Island Regency government achieves the goals and objectives of the RPJMD effectively and efficiently. In addition, the strategy is also helpful as a means to transform, reform, and improve the bureaucratic performance of Morotai Island Regency on an ongoing basis. To realize the vision of the RPJMD of Morotai Island Regency in 2017-2022, the Regional Government will carry it out through five missions prepared and regional development strategies within the next 5 (five) years.

The strategy shows a strong desire for local governments to create added value for local development stakeholders to actively increase their contribution to achieving regional development goals and objectives. This is important considering the government's role and function, which is increasingly shifting toward facilitators, regulators, and the guidance of all regional development stakeholders. Conceptually, a strategy is specifically associated with a single goal or a group of goals with a logical

framework. Multiple goals are inherent with one theme, and one strategy can be developed to achieve a combination of multiple goals. In this connection, the architecture of regional development planning separates into two: (1) strategic planning, namely regional development planning that emphasizes the achievement of regional development visions and missions; and (2) operational planning, which emphasizes achieving service performance in each affair. Everything directly intended to realize the goals and objectives of the RPJMD is considered strategic and carried out through regional development programs and priority programs based on implementing

government affairs. The successful implementation of operational planning in implementing government affairs through the priority programs of each affair supports this strategic planning.

Morotai Island is a special economic zone for fisheries, logistics, and tourism based on the Government Regulation of the Republic of Indonesia Number 50 of 2014 concerning the Morotai Special Economic Zone. The calculation of potential based on dynamic location quotient analysis (DLQ) shows that the agriculture, forestry, and fisheries sectors experience very rapid development fluctuations. More details you can see in Table 5.

Table 5 Morotai regional innovation in 2021 [12]

| No. | Innovation | Development Sector |
|-----|--|--------------------|
| 1 | Aspiration Room | Public Services |
| 2 | Ormas Integrated Administrative Services and Research Recommendation Permits (PATRIOT) | Public Services |
| 3 | PETA KPK (Resolving Findings Through Commitment, Participation, Counseling) | Public Services |
| 4 | Favorite school | Education |
| 5 | GEMAS MORO (Anti Stunting Community Movement in Morotai) | Health |
| 6 | DATAKU (Leprosy Response Village) | Health |
| 7 | RICE PROVISIONS (Integrated local rice) | Food |
| 8 | SIKUAT (Tourist Visit Information System) | Tourism |
| 9 | DEDETA MORO (Digitalization of Tourism Destinations) | Tourism |
| 10 | DATEBI Call Center | Public Services |
| 11 | Mobile library (PUSING) | Library |
| 12 | PERAPAK "Pre-Employment Service Assistance" | Workforce |
| 13 | PERI HALU BPUM (Acceptance of Business Permits Through the BPUM Program) | Licensing |
| 14 | REMEMBER DELICIOUS (HR Development through Fish Derivatives Training) | Fishing |
| 15 | BAPERAN | Health |
| 16 | SEMEDI | Licensing |
| 17 | Fisherman Insurance | Marine |
| 18 | Si-RANI (SPM and SP2D Register Information System) | Government |
| 19 | Si-MAMAD (Online Mail and Disposition Management Information System) | Government |
| 20 | Mother Relaxing in the Kitchen | Health |
| 21 | Salt Fish with Various Flavors (IGA KERAMAS) | Fishing |
| 22 | RATE OF BRIES (Asphalt Dirt Road) | Public Works |
| 23 | Online E-Absent Application | Government |
| 24 | JATI NEGARA (Nae Kadar Farm Road) | Public Works |
| 25 | Shower (gosso ski gale-gale) | Tourism |
| 26 | PJU POST | Lighting |
| 26 | Race To School Free | Education |
| 27 | COFFEE CORNER (Corner - Coordination and Internal Control) | Government |
| 28 | PARE (Sustainable Food Agency) | Food |
| 29 | SALTING (Smart Digital Monitoring) | Government |
| 30 | BERDASI (Application Based Data Source) | Government |

Table 5 explains that the potential base sector on Morotai Island is the agriculture, forestry, and fisheries sectors, with a score of 48.12%. This sector cannot only meet the needs of Morotai Island, but other areas can also use it. Tuna exports were to Korea. The fishery sector is increasing due to increasing fishing facilities, infrastructure, fish farmers, and handing over 102 fishing fleets in 2017. The achievements of this sector confirm that

1. Although the agricultural potential is experiencing rapid development, the production of corn and rice crops has decreased performance;
2. Although the potential of fisheries has experienced rapid development, the production of capture fisheries has decreased performance;
3. The production of food crops and corn is still far

from the RPJMD target;

4. The production of capture fisheries is still far from the RPJMD target.

The development of regional innovation in Morotai Island Regency has begun to show results (even though it did not reach its maximum) due to policies that have a very active impact, especially regarding public services and the disciplinary work of the State Civil Service in Morotai Island Regency. The background of the regional innovation formed in Morotai Island Regency is that the human resources on Morotai Island are still relatively low,

The preparations on Morotai Island should be (1) Identification of the socio-economic culture of the community, (2) Determination of the main priorities for development and targets, (3) Initial socialization of

programs and participatory community dialogue, (4) Identification of existing needs and problems, (5) Preparation and appointment of programs, (6) Preparation of companions, (7) Establishment of local organizations/committees, (8) Preparation of communication forums between institutions and organizations, (9) Collaboration, institutional networking involvement, (10) Training, workshops, seminars and mentoring, (11) Provision of capital incentives/assistance, (12) Development of information centers and databases, (13) Provision of soft loan capital assistance and incentive assistance, (14) Improvement of quality standards and certification, (15) Industry development, (16) Monitoring and evaluation.

Despite well-organized regional innovation planning in Morotai Island Regency, the implementation in the field did not reach its maximum because the carrying capacity is still low, one of which is the strengthening of the people's economy, which did not reach its maximum, thus affecting the low level of public awareness for entrepreneurship through MSMEs.

The innovations carried out by the Morotai Island Regency Government have shown the identity and characteristics of the region as a maritime area. One concrete example is the role of the government in realizing a marine tourism village that is neatly packaged as an agenda for routine activities every year, namely the float competition, which certainly has a positive impact on the surrounding community. Because of this activity, many visiting people refer to and impact the economic growth of the surrounding community. Similarly, the innovations made by the Morotai Island Regency Government have improved the regional economy.

The potential that hinders and needs addressing asap is not improved infrastructure, inadequate information network system, public awareness, and all components related to the importance of regional innovation are still low, so it is necessary to perform continuous and sustainable socialization and the need to increase regional human resources that are directly involved in the realization of regional innovation.

The advantage of innovation in the Morotai area is that the programs offered can positively affect the community. The weakness of Morotai regional innovation is that the implementation of the program policy mandated by the leadership, in this case, is the regional head to the implementer in the field. The principal used is the Morotai local government policy that favors the people, is effective and efficient, accountable and transparent.

The strategy for regional innovation development is to evaluate each program of innovation activities, monitor obstacles and weaknesses, find solutions to get maximum results and provide sanctions for implementers in the field who are not committed to

implementing innovation programs.

According to [7], four ways exist to innovate, namely (1) by invention/revolutionary, (2) by development, (3) by duplication, and (4) by synthetics that we will use later as a reference in determining the innovation coach model. Therefore, the regional innovation development model pays attention to careful planning to create regional innovation coaching designs sourced from needs, problems, and opportunities. This concept must be clear because it is the first step in creating a coaching model based on factual conditions but not on assumptions. The fact is that Morotai Island has been well arranged, but the implementation in the field did not reach its maximum because the carrying capacity is still low, one of which is the strengthening of the people's economy, which has not been maximized, thus affecting the low level of public awareness for entrepreneurship through MSMEs. Strengthening the people's economy on Morotai Island is carried out in stages; the way is to provide opportunities for the community to participate. Arousing the community's desire to try, is evident from the existence of culinary centers and integrated marine and fisheries centers as one of the objects of maintaining fish habitat can last longer. The quality of fish is number one in this innovation; local people as fish consumers will not run away from their habits as fish consumers. Some important notes related to planning this innovation are:

1) The establishment of adequate development facilities is the main element of service around the culinary center;

2) The uniqueness of this innovation is to market local products of Morotai Island, be it Morotai specialty food products or local fish with a ready-to-eat system;

In terms of planning, the preparations that Morotai Island should make in implementing regional innovations are (1) Identification of the socio-economic culture of the community, (2) Determination of the main priorities for development and targets, (3) Initial socialization of programs and participatory community dialogue, (4) Identification of existing needs and problems, (5) Preparation and appointment of programs, (6) Preparation of companions, (7) Establishment of local organizations/committees, (8) Preparation of communication forums between institutions and organizations, (9) Collaboration, institutional networking involvement, (10) Training, workshops, seminars and mentoring, (11) Provision of capital incentives/assistance, (12) Development of information centers and databases, (13) Provision of soft loan capital assistance and incentive assistance, (14) Improvement of quality standards and certification, (15) Industry development, (16) Monitoring, and evaluation, (17) Formulate goals and objectives as objects of innovation. [9] explained that the innovation purpose is to create new conveniences

for people through the discovery or development of new innovative ideas to implement them successfully. The above means that innovations in Morotai can provide novel ideas for land and sea border areas, which can replicate innovations relevant to the region.

The next goal is to organize the availability of supporting resources such as infrastructure, human resources, natural resources, and motivation to build that Morotai carries out with a very high degree of difficulty. Morotai has limited human resources and the low entrepreneurial spirit of the Morotai community. Natural resources can be very good with clean water and abundant marine wealth, but natural resource treatment systems such as tuna still do not show anything different. If you study further, the potential of fisheries in Morotai, North Maluku, is quite extraordinary. The Ministry of Marine Affairs and Fisheries stated that the potential for Morotai tuna could be 200,000 tons, which is only about 20% of the work. The potential of capture fisheries in Morotai is 1,714,158 tons per year. Therefore, North Maluku, an archipelago province with a sea area of 69%, has great potential for marine and large fisheries. To increase malut fishery export products, the local government will implement several policies, among others, encouraging the improvement of the investment climate of the fishery sector, specifically the development of superior processed products such as tuna, skipjack, cobs, vaname shrimp, and seaweed. Further, strengthening downstream through industrialization and certification, fish processing units according to processing feasibility certificate standards and quality assurance systems (hazard analysis critical control point).

Based on the data collection results through focus group discussion, the mechanism for building borders and disadvantaged areas refers to several stages, including the following.

1. The Needs Analysis Stage is where the region can determine its crucial and urgent needs. This stage is the determination stage to develop a coaching pattern in the future. The identification of needs aims to (1) realize the direction of coaching by regional potential and (2) realize a coaching strategy by the regional potential with two stages in the needs analysis: The calculation of sector potential should identify potential and non-potential regional sectors. Potential areas can become regional assets using the dynamic location quotient formula. The potential of this sector is directed at the results of GRDP for four years, starting from 2013 to 2017. The result is that Morotai Island holds enormous potential in agriculture, forestry, and fisheries.

- *Agricultural aspect*: surplus rice from the first harvest on an area of 110 hectares with an area of 300 hectares of agricultural land.

- *Fisheries aspect*: assistance of 48 fishing boats from 83 general fishing cooperatives. The Morotai

Islands Regency has 3,756 fishers. The total potential of Morotai Regency for three Fisheries Management Areas reaches 156 thousand tons with nine types of fish, namely 50% dominated by export-quality tuna. As evidenced by 2018, the Pad of the Morotai Islands Regency increased by 1000% in the fisheries sector.

- *Forestry aspects*:

- a. *The supervision and control of forest products*: The main objective of this policy is to improve the orderly business and circulation of forest products. The results should be increasing regional income from forestry contributions and preventing illegal logging. The policy of Legal Certainty in Forest Product Management begins with planning regional rules on forest and forest product management systems based on higher regulations so that business actors, licenses, and related parties can perform their functions properly.

- b. *Forest and land rehabilitation*: This policy intends to maintain intact forests and accelerate the recovery of forests and critical lands so that they return to optimal functioning economically and ecologically and plantation forests that have economic and ecological value in production forest areas. Another expected impact is the development of social conditions of the communities living around the development of forest concession activities through the acquisition of direct benefits both as business actors and partners.

- c. *Increasing community understanding and participation in forestry development*: This policy intends to understand communities in the forest so that they always play an active role in forestry efforts that can improve their economy and ecologically ensure that the sustainability of the forest continues to be maintained.

- d. *Fostering and protecting the environment*: This policy intends to improve access to information and infantilization of the potential of natural resources and the environment to obtain a database, improve the effectiveness of management, conservation, and rehabilitation of natural resources, prevent and control damage and pollution of the environment and increase public understanding

2. Basic needs analysis should answer coaching models relevant to factual conditions. By studying this, researchers can discover the actual situation in the field. This analysis looks at the realization and the target. This analysis observes educational, health, housing, and social protection needs.

- a. The planning stage refers to the results of the need analysis and sector potential analysis, and then a coaching plan is prepared. In planning, in general, several components are carried out. The trick is to develop goals, set coaching goals, plan coaching, design coaching materials, compile coaching schedules, set coaching media, and develop coaching instruments. The goal of coaching is the reference point that will be achieved during the coaching activity. For

this reason, each training implementer should well understand the formulated objectives. In building the border area, the intended target has been known in advance. Therefore, coaching goals should create a more innovative and creative regional innovation program. Implementation Stage: This is the stage where the techniques of building or motivating to grow development are: In this case, innovation actors at the Provincial/Regency/ City level collect data on regional innovations, both regional innovations facilitated by the local government as well as regional innovations carried out by the community.

b. The model of building areas in border areas will lead and hold the principles of cooperation, constructiveness, participation, effectiveness, and efficiency. Cooperation here means a relationship with various parties. The point is that innovative regions can have at least open networks with other regions that will teach (1) how to open the horizons of thinking or thinking patterns for regions to be creative to cooperate with more developed regions and (2) how to build regional capabilities in negotiating to realize the investment in innovation. Therefore, the learning process will occur very quickly because one region with other regions shares innovation information.

c. Constructive and creative principles mean that developing the region must always be able to perform various constructive activities through creative thinking and effort to improve professionalism. Participation involves the community as an innovation actor to achieve a goal. [8] distinguish four types of participation, namely participation in decision-making. Second, participation in the implementation. Third, participation in use-making. Fourth, participation in the evaluation. 1) Participation in decision-making is mainly concerned with determining alternatives with society about ideas or ideas that concern the common interest. Forms of participation in this decision-making include contributing ideas or thoughts, attendance at meetings, discussions, and responses or rejection of the programs offered. 2) Participation in implementation includes mobilizing funding resources, administrative activities, coordination, and elaboration of programs. Participation in implementation is a continuation of a pre-initiated plan related to planning, implementation, and objectives. 3) Participation in benefit-taking. Participation in profit-taking is inseparable from the implementation results related to quality and quantity. In terms of quality, it is evident from the output, while in terms of quantity, it is evident from the percentage of program success. 4) Participation in the evaluation. Participation in evaluation relates to implementing pre-planned programs and determines their achievements.

d. The evaluation stage, in principle, is to see how far the built area can achieve success. This evaluation aims at assessing reactions, behavior, and results meaning seen from the process at the end of the implementation. Assessing reactions shows the

satisfaction of the service recipient community or during the learning process. According to [1], assessing reactions means measuring the potential of the sector to which changes can be made usually done to hone the competence of ASNs who join in innovation. Behavioral evaluation can be done by (1) comparing behaviors before and after participating in the program as well, (2) surveys/reviews with trainers, superiors, and subordinates of program participants after returning to the workplace, (3) comparing the costs used with the benefits obtained after training, and how they improve.

The behavior of results determines the success of achieving innovation goals. The performance achievements obtained in terms of size per year can identify this evaluation. The evaluation at this stage focuses on the final occurring results because the participants have participated in a program. The emphasis is on outcomes: has innovation changed the target recipients of innovations? whether it is a change in mentality, attitude, mindset, creativity, or innovation culture.

The follow-up stage regards incentive funds. The provision of incentive funds has become a discourse, and the proposal goes into the third year. Regions that have successfully carried out regional innovations will get incentive funds. These incentive funds are also a stimulus for them to further maximize their creativity and ideas in innovating.

Fig. 3 describes the model of developing the region through innovation with the DLQ approach, namely, with several steps.

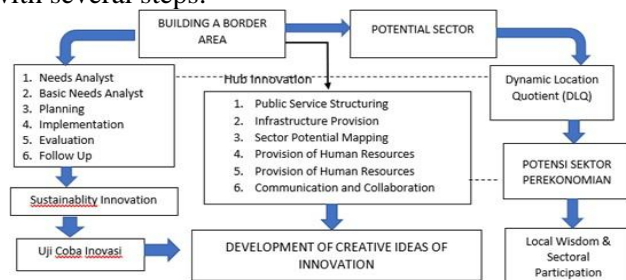


Fig. 3 The model of developing the region through innovation with the DLQ approach

Building a border area does not leave synchronization with the regional medium-term development plan. The economic potential in Morotai can be maximized by looking at not improved potential sectors. Other potentials in Morotai are: (1) Border areas and underdeveloped areas are extreme areas with various problems. (2) Border areas and underdeveloped areas are not areas that close themselves off from the outside world; instead, these areas will be more easily recognized and publicized with various advantages of natural resources and history behind them. (3) Exotic capitalization of natural resources owned by border areas is not inferior.

This paper is not only an introduction to the Morotai area but also contributes academically by adding

references to innovations related to the development of innovations based on regional excellence. Innovation policy is not just a product but a development process; a new way of introducing innovation following regional potential is excellent. Although Morotai has not overcome the problem of innovation by raising regional excellence, the mapping of superior potential can be known by considering (1) innovation profit and (2) innovation creation based on potential processing later.

4. Conclusion

The study results showed that exit strategies can be carried out in sectors based on DLQ that are experiencing rapid growth, such as agriculture, fisheries, and forestry. With several stages, namely:

1. The needs analysis stage is carried out through activities to calculate the potential of the sector in 2011–2017 and analysis of basic needs.

2. The needs planning stage uses setting coaching goals, planning coaches/facilitators, designing coaching materials, compiling coaching schedules, and providing regional innovation coaching media.

3. The implementation stage is by creating coaching techniques followed by innovation actors and coaching techniques with the principles of cooperation, constructiveness, participation, efficiency, and effectiveness.

4. The evaluation stage of coaching is to perform three activities: reaction evaluation, behavior evaluation, and evaluation of results.

The follow-up stage is the activity of planning the following program and providing incentive funds for the winners of the Innovation Government Award. This award is an appreciation for regions that have succeeded in making regional innovations. Building border areas in the future will be carried out bottom up, areas that have needs and regions that will also form development relevant to them. Some of the things we propose are: First, regions performing innovation activities can first perform regional mapping based on basic needs and potential needs analyses. The goal is to make it easier for them to implement and determine the form of innovation and comprehensively maintain its continuity and sustainability. Second, Morotai Island Regency can collaborate with investors in developing potential in Morotai, especially:

- Tourism developing through the revitalization of museum construction resulting from the second world war and revitalization of coastal area layouts by providing public facilities such as RPTA;

- Developing seafood such as tuna, tuna, skipjack, cob, vaname shrimp, and seaweed in the form of a food preservation formulation system in the form of tuna sardines, cob sardines, tuna chips, and seaweed drinks;

- Creating an electricity system using river water, such as Energy Independent Villages. This step

is to anticipate the occurrence of power outages almost every day in Morotai;

- Developing the potential of the regions around Morotai, namely the East Halmahera, Central Halmahera, and North Halmahera seas. These areas need support to become suppliers of tuna for export;

- Developing vanamese, tuna, and skipjack shrimp farming with due regard to the conditions of the aquatic environment should be ideal, especially the content of dissolved oxygen (DO), alkalinity, and pH.

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