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A Conception of Pioneer Air Transportation Services as a Prime Mover for the Acceleration Regional Development in Papua Island

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Abstract:- The pioneer air transport policy has been operated for 36 years and still continues to this day with the goal of accelerating the development of isolated areas, remote and border areas. The results of this research showed that the pioneer air transport services have not yet indicated its contribution to the development of the service area. The purpose of research is to find a conception of accelerating the development of the area served the Pioneer air transport. The method is used in this research is to assess the pair comparison at each hierarchy specified. The results show that to accelerate the development of the region on the island of Papua, needed accelerated development of the road network or parallel for the pioneer air transport services with multi-modal transportation.

Keywords:- Air Transportation, regional development, Transport Model.

I. INTRODUCTION

The number of urban districts in 1999 are 13 districts, 40 districts into the city in 2011, this condition affects the movement patterns of transport, given some of the sub district switch functions as the capital of the district. Papua people's demands to accelerate the development of outreach to rural areas because of geographical obstacles and long-range control, so that the presence of the Regional Government Law No. 22 of 1999 and revised by No. 32 of 2004 provides regional growth opportunities.

Regional divisions provide opportunities opening routes-new routes for the pioneer air transport, as a first step to open the isolation of the area and the accelerated development of the region, given the mode of air transport is the only mode of transport that is able to reach some of the Capital District. The pioneer air transport policy has been operated for 36 years and still continues to this day with the goal of accelerating the development of isolated areas, remote and border areas. The results showed that the The pioneer air transport services have not demonstrated their contribution to the development of the service area.

Dunn (1994) explains that public policy is related actions, compiled by government agencies or officials in various sectors, while policy analysis is the beginning and not the end in an effort to improve the decision-making process. [1] Mustopodidjaya (2000) argues is the Policy Analysis needs and values have not been able to meet a variety of aspects that needed improvement through policy analysis that produces public policy again [2]. This research aims to produce a concept that is able to accelerate the development of the island of Papua.

II. STUDY OF THEORY

The government's policy in providing transportation services to the community can be The Ship Follow the Trade, which is based on the demand for transport services and economic and social activities and the Trade Follow the Ship that transport services are based on its role as a driver of the development of the sector in spurring the development of a region, as influenced by various characteristics of the area such as geography, topography, demographics and potential of the region. National transport development policy has been prepared in the form of the National Transportation System set out in the National Transport level. The level of Regional Transportation, the level of Local Transportation and a reference in the development of network infrastructure and transport services [3,8,9].

Rewansyah (2010) explains that public policy is essentially a decision made by the government or regulatory authorities with the intent and purpose to address specific issues, to carry out certain activities, which are conducted by government agencies, have the authority in furtherance of the state government and the task of nation building. [4].

Dunn (1994) explains that policy analysis can be viewed as an assessment process that includes five components of the policy information is transformed from one to another by using five procedures, namely the formulation of the problem, forecasting, monitoring, evaluation and recommendation, as shown in Figure 1.

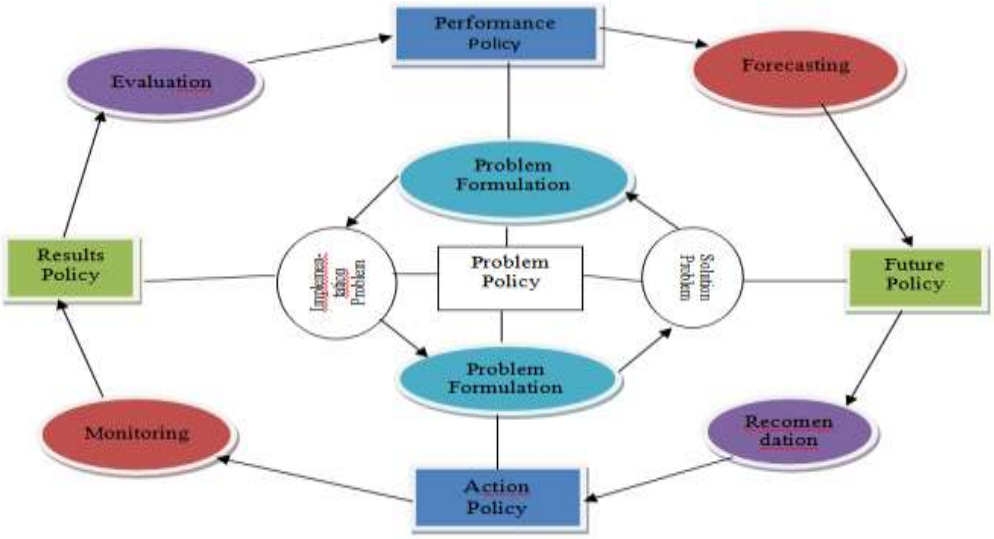

Figure 1. Analysis of problem-oriented policy

Jinca (2008), defines the efficiency and effectiveness in public policy is an output or efficiency of production of services/transportation infrastructure is generated based on the goals of the program input circuits and the process, while effectiveness is the result, benefits, effects resulting or arising from the existence of output by taking into account the policy objectives set. [5].

Wunas (2010) explains that there are two (2) process in the development of the region (1) center forward will drain the hinterland town, (2) spread effect is the area behind come forward because developed regions. In addition, the development of the area can be developed based on the hierarchical order of the function areas or city/region development and major development begins with the smallest hierarchy or rural centers. [6].

Shaaty (1980) developed a model in setting the policy that comes from some of the problems in the form of criteria, then the criteria for each factor was carried out the pair comparison between the level of factor in the criteria for eligibility is higher. Explaining the two forms of hierarchy is a hierarchy there is a direct relationship to the first hierarchy below it, while the second hierarchy is not absolute hierarchy occur directly underneath the hierarchy depends on the substance of the issues to be solved [7] as shown in Figure 2.

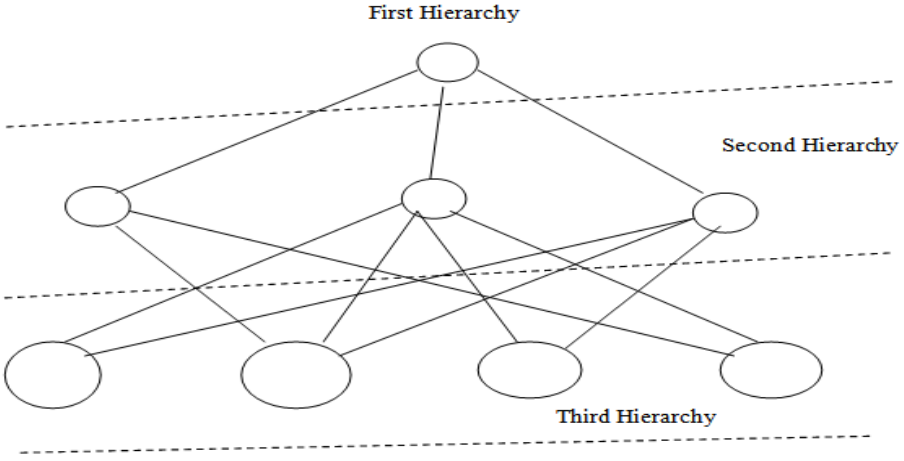

Figure 2. Hierarchy direct link below

III. RESEARCH METHOD

In order to find a conception of accelerating the development of the island of Papua, through the analysis hierarchy process based on the Pioneer Air Transportation System. First Hierarchy Air Transportation System and Regional Development, the second hierarchy is the regional development scenarios transportation benefit is economic and social hierarchies further third is the regional development indicators are GDP and economic Manpower Absorption whereas the social is the Human Development Index and the community mobility. Hierarchy Fourth is a Pioneer Airport, Airport Capacity, Multi modal road transport, Transport Modes Multi Rivers and Lakes, Multi Mode and Multi Mode Transport Crossing Sea Transportation.

Steps taken to get the eigen value vector at each hierarchy Possible classes are:

1. Set the number of hierarchy that includes contributing to the Pioneer Air Transport System was able to push the development of the island of Papua.
2. Create a matrix at each level of the hierarchy.
3. Doing an assess comparison couples whose information sourced from primary data that has been processed.
4. Sum of each value in the matrix rows, forming a matrix column values
5. Calculate the value of the new matrix row by comparing the number of matrix rows by the number of matrix columns.
6. Create a new matrix based on the matrix in paragraph (2) by comparing the value of the cell to the matrix in paragraph (5).
7. Sum matrix rows in points (6) and then divided by the number of matrix (n x n), this result is an eigenvector or priority value at each level of the hierarchy.
8. Multiply the matrix in paragraph (2) the value so obtained matrix eigenvector new line and the result divided by the value eigenvector.
9. The scores for items (8) and then divide by the number n or a matrix (nxn) and the result is the Eigen value or λ max.
10. Calculate the consistency index (CI) with the formula CI = (λ max - n) / (n - 1), in this case n is the number of matrix (n x n).
11. Calculate the Consistency Ratio (CR) with the formula: CR = CI / RI, in this case is the Random Index can be seen from the table based on a matrix (n x n).
    If the value of CR ≤ 0.1, then the value is a value that has a good level of consistency and accountability. To generate each matrix eigen-value vector data processing is done by a computer program.
12. To find the highest value eigen vector at each hierarchy which is the conception of development do matrix multiplication as follows:
    KP is the Conception of Development, namely [Sk] [IPW] [Trans]
    Sk is the Transportation Benefit Scenario
    IPW is the Regional Development Indicators
    Trans is a transport mode.
    In the matrix multiplication must be eligible i.e. the number of columns of the left matrix must equal the number of rows in the matrix of the right, so that will form the matrix:
    KP = [BS 1x 2] [RDI 2 x 4] [Trans 4 x 6]

IV. DISCUSSION

Analysis of the conception of the development of the transportation system in Papua Island used multi-criteria approach, based on primary data sourced from stakeholders to assess the importance transportation services through assessment comparison couples. Data comparison of couples each hierarchy established in a matrix (2 x 2) for scenario development, (4 x 4) for indicators and regional development (6 x 6) for transportation services.

Data comparison pair between economic and social benefits obtained value of 2 for the social benefits, the economic benefit is 0.5, so it can be obtained the Sk1 vector eigen values for economic benefits as much as 0.3333 and social benefits Sk2 eigen vectors are 0.6667, λ max: 2 , CI; 0 and CR; 0, further processing of the data for the matrix (4 x 4) and (6 x 6) using program excel so the resulting eigen vector, λ the maximum, and Consistency index and Consistency ratio as in Attachment 15, which is the third hierarchy IPW obtained (0.1854; 0.2031), IPW2 (0.0993; 0.0922), IPW 3 (0.4637; 0.4461), IPW 0.2516; 0.2586), thus forming a matrix multiplication:

IPW =	(0,3333	0,6667)	0,1854	0,0993	0,4637	0,2516
			0,2031	0,0922	0,4461	0,2586

The result is GDP 0.2041, 0.0935 employments, the Human Development Index: 0.4486 and community mobility: 0.2538 hereafter devised a matrix multiplication:

CD = (0,2041 0,0935 0,4486 0,2538)

0,0447	0,2148	0,4136	0,0786	0,0955	0,1525
0,0399	0,1302	0,4579	0,0654	0,0871	0,2195
0,0543	0,2010	0,4194	0,0762	0,1195	0,1262
0,0399	0,1302	0,4580	0,0654	0,0871	0,2195

The result is a Pioneer airports 0.0485, airport capacity of 0.1728, and multi-modal road transport service: 0.4325, multi-modal service transport streams and lakes 0.0749, multi-modal transportation services crossing: 0.1054 and multi service marine transportation 0.1659, as shown in Figure 3.

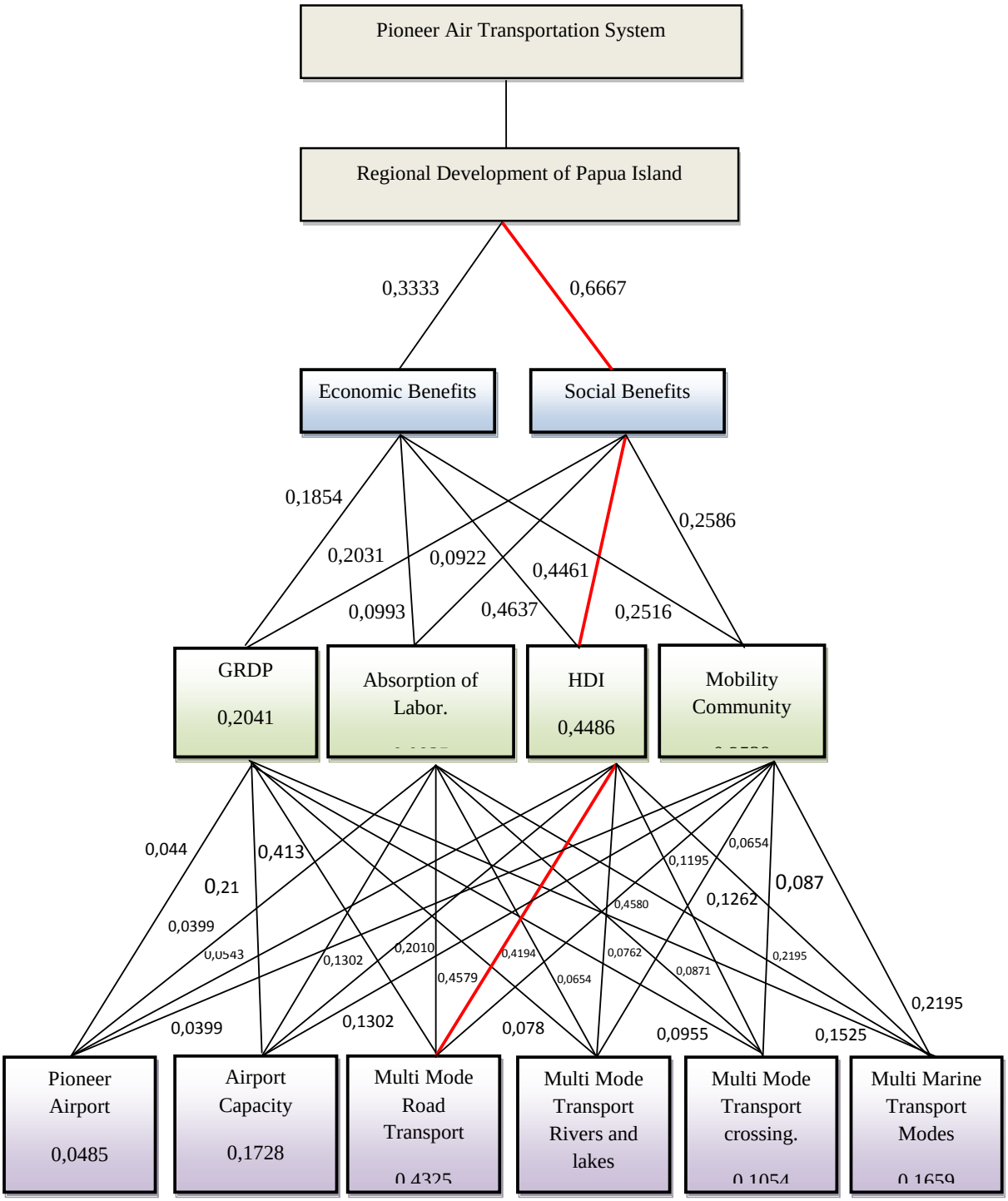

Figure 3. Eigen vectors Value each indicator of hierarchy

Based on the analysis above shows that the multi-modal road transport produces the highest value means to accelerate the development of the area in Papua Island is needed in the form of policies. The pioneer air transport operations, parallel with multi-modal road transport services.

The second order is the development of airport capacity can encourage the development of the region, it is based on the operation of large aircraft will increase the mobility of people and goods though not supported by other modes of transportation.

Multi service sea transportation was number three means to promote regional development in areas served by the Pioneer air transport in coastal or island still required sea transportation. The fourth is a multi-modal transportation services crossing, this condition is based a few areas in Papua Island who served modes of transport crossing the parallel with Pioneer air transportation services. The fifth is a multi-modal transportation service of rivers and lakes. Transportation services in rivers and lakes can be found in Papua Island River region; Memberamo, Merauke, Boven Digul, Mimika and Lake Sentani, and the final sequence is a pioneering air transport services

These findings prove that the pioneer air transport services are expected to support the development of its service area is relatively small contribution because it turns out the main role only put emphasis on isolation opening remote, isolated and border, so without opening multi-modal transportation services especially construction of roads linking the capital district and the district will affect the development of the region.

To assess the comparative assessment of *r* data validation testing partner respondents based on the value Consistency Ratio (CR) which must be ≤ 0.1, and the results showed the whole matrix produces Consistency ratio is less than 0.1, meaning that respondent excellent judgment. To determine the value of consistency ratio can be seen in Table 1.

Table 1. λ max value, Consistency Index and Ratio

Indicator	λ max	Consistency Index	Consistency Ratio
GDP	6,4	0,0731	0,0589
Labor	6,2	0,0419	0,0338
HDI	6,2	0,0389	0,0314
Mobility	6,2	0,0419	0,0338

Source: Results of Analysis

V. CONCLUSIONS AND RECOMMENDATIONS

Conceptual accelerating regional development in Papua Island to do with inter-service systems and multi modal transport operations of integration between transport modes with the pioneer air transport modes road, or other modes of transportation. Establish an integrated policy services for the pioneer air transport system with the construction and improvement of roads linking the provincial capital and the capital district, or the district capital with the capital of the district, or through other transportation modes based on the characteristics of the region

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