Study on the Readiness of the Regional Government of South Sulawesi for the Mamminasata Urban Railway Project with Non-State Budget/Regional Budget Financing

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Abstract. Non-Budget Financing The government raises alternative sources of financing to be used to contribute the financing strategic national infrastructure projects that have commercial value and have an impact on improving the Indonesian economy. One example of this scheme is PPP (Government and Business Entity Cooperation). The purpose of this study was to see the readiness of the South Sulawesi regional government in the Mamminasata Urban Railway Project with Non-State Budget/Regional Budget Financing. It is believed that the Public-Private Partnership Scheme with Business Entities (PPP) was believed to be alternative financing that can improve infrastructure development and the efficiency of development implementation which creates the quality of a product and service in the distribution of capital and risk as well as the competence of human resource expertise together. It was hoped that the PPP Project in the construction of the Mamminasata Urban Railway Infrastructure could become a way out in Non-State Budget/Regional Budget financing and become a solution by the National Mid-Term Development Plan (NMTDP) and Regional Mid-Term Development Plan (RMTDP) to achieve the construction of a 3258 Km railway line. The suggestion put forward into this study is the government needs to establish a transportation management body that integrates all modes of transportation and manages commercial areas following the authority of the PJPK in increasing revenue for an investment return on Availability Payment (AP).

1. Introduction
Makassar as a growth center, supported by the districts of Maros, Sungguminasa, and Takalar, will be developed into the megapolitan city of Mamminasata in 2020. The Mamminasata concept refers to the JABODETABEK megapolitan area (Jakarta as a growth center, supported by the satellite cities of Bogor, Depok, Tangerang, and Bekasi). The Mamminasata area will become the economic center of South Sulawesi Province, and even in Eastern Indonesia.
In the Sulawesi Island Spatial Plan, Makassar City is planned as a National Regional Growth Center which is expected to be able to encourage the growth of the surrounding cities, as a production center for Eastern Indonesia and the island region, such as agriculture, plantations, marine tourism, fisheries, industry, transportation ( land, sea, and air). To support this plan, it is necessary to support a metropolitan/megapolitan...
service transportation system that is integrated, among others, the development of mass transportation networks, for example, urban railways.

There are important resistances when Indonesia wants to catch up with this underdeveloped infrastructure. One of them concerns the problem of infrastructure financing, considering that in reality, the state budget is insufficient to make infrastructure development in Indonesia cannot rely on the state budget.

Non-Budget Financing The government raises alternative sources of financing to they could be used to contribute to financing strategic national infrastructure projects that have commercial value and have an impact on improving the Indonesian economy. One example of this scheme is PPP (Government and Business Entity Cooperation).

2. Literature Review

The system is a combination of several components or objects which were interrelated. In any system organization, changes to one component could cause changes to other components. In a mechanical system, the components are "mechanically" related, for example, the components in a car engine. In 'non-mechanical' systems, for example in the interaction of land use systems with transportation network systems, the existing components couldn't be mechanically connected, but changes in one component (the 'activity' system) could cause changes in other components (the system 'networks' and 'movement' systems). The principle of a "mechanical" system is the same as a "non-mechanical" system [1].

Meanwhile, transportation according to Miro (2012) in general could be defined as an effort to move or move people or goods from a location called the location of origin, to another location which is usually called the destination location, for certain purposes by using certain tools as well[2].

Transportation planning itself could be defined as a process whose goal is to develop a transportation system that allows people and goods to move or move places safely and cheaply [3].

Meanwhile, according to Eddu Pandika (2015), transportation planning is an attempt to estimate the number and location of transportation needs used in the future or the planning year, especially in urban areas. The transportation planning process is carried out primarily to see the relationship between transportation and land use. Land development patterns will result in the need for transportation, on the other hand, the form of the transportation system will affect land development patterns [4].

Generically, the rail transportation mode is the backbone of the transportation system in various regions. For the needs of movement with various characteristics (freight, passenger, intra-city, inter-city, short-distance, medium-long transportation) trains remain the prima donna and have a comparative advantage over other modes [5].

The Indonesian government realizes the importance of private participation in accelerating infrastructure development in Indonesia, especially given the government's limitations in funding infrastructure needs. Based on the estimated 2015-2019 infrastructure funding needs, the government is only able to meet 41.3% of the total infrastructure funding needs, which is around IDR 4,796 trillion. Private participation is expected not only to fill the funding gap but also to share knowledge and experience in the development, operation, and management of quality infrastructure services. To that end, the Government of Indonesia has committed to continuously improve and innovate in increasing investment attractiveness and to ensure that private involvement is not hampered.

Currently, the commitment to accelerate infrastructure development continues. The government remains committed to pursuing equitable development of infrastructure projects throughout Indonesia. In line with
this, the 2015-2019 National Mid-Term Development Plan (NMTDP) 2015-2019) states that PPP is an alternative approach to infrastructure development [6].

3. Research of Methodology
The research approach used in this research is to use qualitative descriptive analysis with secondary data collection techniques. Secondary data collection is through district and sub-district data in figures from the Central Bureau of Statistics (CBS) of South Sulawesi Province, regional income in the 2019-2023 RMTDP, and the Spatial plans of the South Sulawesi Provincial Government 2009-2029, area development and transportation plan documents in the Mamminasata Area.

4. Result and Discussion

4.1 Regional Characteristics of South Sulawesi Province
Geographically, the land area of South Sulawesi Province is traversed by the equator which is located between 0012' ~ 80 South Latitude and 1160 48' ~ 122 '36' East Longitude, which borders West Sulawesi Province to the north and the Gulf of Bone and Southeast Sulawesi Province to the east, and borders the Makassar Strait to the west and the Flores Sea to the east. The area of South Sulawesi Province, especially the land area, has an area of approximately 45,519.24 km2, most of which are located in the southwestern part of Sulawesi Island and some are in the southeastern peninsula of Sulawesi Island.

The total area of South Sulawesi Province is 46,717.48 km2. Administratively, the government of South Sulawesi Province is divided into 20 districts and 3 cities until 2008, while for 2009 it consists of 21 districts and 3 cities with North Toraja Regency which occurred in 2010, consisting of 303 districts and 2677 villages/wards. North Luwu Regency is the largest district with an area of 7,502.68 km2. The district area constitutes 16.46 percent of the entire South Sulawesi region (CBS, 2009). The population is one of the basic assets in the implementation of development. Based on CBS data, it can be seen that the total population of South Sulawesi Province in 2008 was 7,771,646 people with the largest population in Makassar with a total of 1,282,418 people. The population density of urban areas is a logical consequence of the high economic activity there. Therefore, the area of urban areas is relatively narrower than the regency areas, the population is relatively larger, so the population density is getting higher.

South Sulawesi's GRDP at the prevailing prices in 2008 was around 85,143.19 billion. The agricultural sector has the greatest added value compared to other sectors, reaching the amount of 25,071.81 billion. This was followed by the second largest trade, restaurant, and hotel sector with added value reaching 13,913.80 billion. The processing industry sector in South Sulawesi, which is expected to be able to support the agricultural sector with an agro-industrial orientation, turns out to be the third-largest added value, reaching 11,060.44 billion. South Sulawesi's GRDP at constant 2000 prices in 2008 was 44,549.82 billion or an increase of about 7.78 percent, higher than in 2007.

4.2 Characteristics of the Maminasata Study Area (Makassar, Maros, Takalar)
4.2.1 The characteristics of the Makassar territory. The population of Makassar City in 2009 was 1,272,349 people, consisting of 610,270 men and 662,079 women. The population distribution of Makassar City, broken down by sub-district, shows that the population is still concentrated in the Tamalate sub-district, which is 154,464 or around 12.14 percent of the total population, followed by Rappocini sub-district with 145,090 people (11.40 percent), Panakkukang district as many as 136,555 people (10.73 percent), and the lowest was Ujung Pandang sub-district with 29,064 people (2.28 percent). In terms of population density,
the Makassar sub-district is the most densely populated sub-district at 33,390 people per square km, followed by the Mario sub-district (30,457 people per square km), Bontoala sub-district (29,872 people per square km). Meanwhile, the Biringkanaya sub-district is the sub-district with the lowest population density, which is around 2,709 people per square km. Based on the results of the 2009 GRDP calculation, the value of PDRB Makassar City at the current price has reached Rp. 31,263,651 billion rupiah. Meanwhile, the GRDP at constant 2009 prices was Rp. 14,798.187 billion. Where the main sector contributing to GDP is still dominated by the trade, restaurants, and hotels sector. Meanwhile, the realization of the Regional Revenue Budget in the city of Makassar in 2009 was Rp. 1,215,460,818,849.79, while the Realization of Regional Expenditure in Makassar City in 2009 was Rp. 1,239,084,281,517.01.

Figure 1. Administrative Map of Makassar City

4.2.2 Characteristics of the Maros Region. Maros Regency has a population of around 306,687 people or around 68,647 households which occupy an area of 1,619.12 km with a density of 189 people / km². The total population consists of 147,210 men and 159,477 women. In general, the population of women is more than that of men. This can be shown by the sex ratio whose value is less than 100. In 2009, for every 100 female residents, there were 92 male residents. The potential of natural resources can be seen through the GRDP. During the period 2005 - 2009, the development of GRDP of Maros Regency has increased wherein 2005 it was Rp. 899,862 million, in 2006 it increased by Rp. 18,150 million or Rp. 918,012 million, in 2007 it increased by Rp. 40,013 million or Rp. 958,025 million, in 2008 it increased. amounting to IDR 55,889 million or IDR 1,013,914 million, and in 2009 and increase of IDR 63,563 million or IDR 1,077,477 million.
Meanwhile, the potential for human resources can be described by the large number of workers owned by a region. The number of workers in Maros Regency during 2005-2009 experienced fluctuations wherein 2005 there were 228,531 people and decreased in 2006 as many as 26,316 people. Meanwhile, in 2007 there was a decrease of 1,371 people. However, in 2008 there were 5,760 people and in 2009 there were 3,477 people. Meanwhile, the potential for capital resources during the last five years, namely 2005-2009, the total private investment invested in Maros Regency was Rp. 1.04 trillion, wherein 2005 it was Rp. 368,895,295,000 and increased by Rp. 15,349,804,000 or to Rp. 384,245,099,000 in 2006. In 2007 the total investment amounted to Rp. 393,816,062,000 also increased by Rp. 49,890,253,000 or to Rp. 443,706,315,000 in year 4.

4.2.3 Regional Characteristics of Takalar Regency. Economic development in Takalar Regency from year to year shows a positive direction. The improvement in the economic conditions of Takalar Regency is mainly driven by economic sectors that have a significant share of the regional economy. Regarding its contribution to GRDP, the contribution from the agricultural sector was 54.71% and the trade sector was 10.62%, while the manufacturing sector contributed 9.45% of all economic construction in the Takalar area. Thus the trade sector and the agricultural sector are sectors that can be expected to restore the economy of the Takalar district because these sectors in addition to absorbing a large number of workers also drive the development of other sectors.

4.2.4 Regional Characteristics of Gowa Regency (Sungguminasa). The population of Gowa Regency in 2010 was recorded at 652,329 people consisting of 320,568 people or 49.1 percent of the male population, and 331,761 people or 50.9 percent of the female population. Gowa Regency PDRB based on the prevailing price in 2009 amounted to Rp.4,309,671.25 million, while the GRDP at the 2000 constant price was Rp.1,782,158.63 million. The economic growth of the Gowa Regency in 2009 was 7.99 percent, an increase compared to 2008 which was 6.92 percent. The agricultural sector as the leading sector in Gowa Regency grew by 5.23 percent, the transportation and communication sector experienced the highest growth, namely 15.19 percent. This is because communication sub-sector has grown significantly, which is more than 18 percent. Meanwhile, seen from its contribution to total GRDP, the agricultural sector is still dominant, contributing 45.65 percent, although it has decreased compared to 2008. Other sectors that also contributed significantly were the service sector and the construction sector. PDRB Perkapita of Gowa Regency in 2009 reached Rp. 6,981 million, an increase of 21.79 percent compared to 2008.

4.3 Regional Fiscal of South Sulawesi
The regional fiscal space of South Sulawesi Province during the 2014-2018 period decreased from 63.09 percent in 2014 to only 38.25 percent in 2018. It is illustrated that although the value of fiscal space has increased, the percentage of fiscal space has tended to decrease during this period. This fact indicates an increase in the component of regional revenue that regional governments can no longer create in funding their development priorities, due to the large component of regional revenue that is designated. The decline in the percentage of fiscal space in South Sulawesi during this period was mainly driven by a modest increase in designated components of regional revenue such as DAK, grant funds. For this reason, the regional macroeconomic growth assumptions formulated in this RMTDP do not depend solely on the real fiscal capacity of regional finance owned by the regional government of South Sulawesi Province. The regional financial fiscal capacity of South Sulawesi Province must receive optimal support from the state financial fiscal allocation. At the same time, it couldn't be ignored and must even be able to synergize with the allocation and fiscal capacity of the district/city financial districts in South Sulawesi Province.
Thus, policies to encourage increased private investment from the demand side are not only aimed at increasing labor absorption through job creation and business fields but must further encourage the production of strategic commodities. For this reason, the tendency of more expansive financing to be pursued by South Sulawesi must ensure that it increases the inclusiveness of economic growth achieved so far. The funding framework for the allocation of regional development programs is to create an investment climate to encourage increased regional investment.

![Figure 2. Regional Fiscal Space of South Sulawesi Province for the period 2014-2018](image)

### 4.4 The Mamminasata Urban Railway Project Plan

The Makassar - Maros - Sungguminasa - Takalar (Mamminasata) Railway line development project as an urban railway route in South Sulawesi Province is to accelerate the equitable distribution of national development following the 2015-2029 NMTDP and arranged in the South Sulawesi Provincial Spatial Plan. The planned Makassar - Maros - Sungguminasa - Takalar (Mamminasata) Railway Line will have a route length of approximately ± 62 km and will pass through three districts and one city in South Sulawesi Province, namely: Maros Regency, Takalar Regency, Gowa Regency, Makassar City. The purpose of this development is to accelerate development through increasing passenger traffic flow, building national and regional connectivity, and meeting the target of developing a 3,258 km railway line by 2019. Mamminasata (Maros - Makassar - Sungguminasa - Takalar) Mamminasata Route of Trase (Total 62.73 km). It is distributed due to the route as follows:

1. Route I : Bandara Hasanuddin – New Port – Karebosi
2. Route II : Maros – Bandara Hasanuddin – Karebosi
3. Route III : Karebosi – Tanjung Bunga – Takalar
4. Route IV : Karebosi – Sungguminasa – Takalar
5. Route V : Pettarani – Pa’baeng-baeng
6. Route VI : Batang Ase – Moncongloe – Unhas
7. Route VII : Graha Pena – UIN – Palangga
The Indonesian government realizes the importance of private participation in accelerating infrastructure development in Indonesia, especially given the government's limitations in funding infrastructure needs. Based on the estimated 2015-2019 infrastructure funding needs, the government is only afforded to meet 41.3% of the total infrastructure funding needs, which is around IDR 4,796 trillion. Around 36.5% of the funding gap is expected to be reached through cooperation with Non State Budget / Regional Budget business agencies.

4.5 Regional Readiness in Non-Government Regional Financing Policies
To achieve the target of regional development performance continues to increase every year and suitable with Law Number 23 of 2014 concerning Regional Government and Law Number 6 of 2014 concerning Villages Government, the consequences of handing over governmental authority from the Central Government to Regional Governments, through regional autonomy which has implications for the increasing need for funds and development financing in the region, meanwhile the South Sulawesi Provincial Government has limitations in the capacity to finance regional development. For this reason, other sources of financing are needed through Regional Financing Partnerships conducted between the Government and the private sector as well as with the Non State Budget / Regional Budget Governmental Business World.

4.5.1 The PPP Scheme. The PPP Scheme is a cooperation between the government and business entities in the provision of infrastructure for the public interest, with provisions that refer to special specifications.
previously determined by the minister/head of institutions/heads of regions / state-owned enterprises (BUMN) / entities. Regional owned enterprises (BUMD), which partly or entirely use the resources of the business entity while still paying attention to the sharing of risks among the parties concerned. The benefits of using the PPP scheme in the provision of infrastructure are the provision of quality, effective, efficient, right on target and on time infrastructure; continuity in planning, construction, operation and maintenance processes; and overcoming limited government funding capacity by mobilizing private funds, so that infrastructure provision can be optimized. With the legal basis that has been stated in Presidential Decree No.38 / 2015 wherein the regulation, it is stated that the form of return on investment to private parties (business entities) for infrastructure provision can come from payments by infrastructure users in the form of tariffs (user fees), payments by the person in charge of the cooperation project (PJPK) through the availability payment scheme, or payment in other forms as long as it does not conflict with laws and regulations. Infrastructure projects with a PPP scheme can be initiated by ministers/heads of institutions / regional heads called solicited projects or by private parties/business entities / BUMN / BUMD which are called unsolicited projects..

4.5.2 General Description of PPP Stages. According to Perpres 38/2015, the following are the stages of submission for PPP implementation.
   a. Containing Preliminary Study
      1. Requirement Analysis
      2. Compliance Criteria
      3. The criteria for determining the benefit value of the business entity
      4. Schematic analysis of project financing schemes
      5. Recommendations and follow-up plan
   b. Public Consultation
      1. Regarding receiving public and stakeholder responses
      2. Evaluate the results of the plan
   c. Feasibility Study
      Which contains legal and institutional studies, technical studies, economic studies, environmental studies, PPP forms studies, risk studies, studies on the need for government support and government guarantees, and studies on outstanding issues.
   d. Exploring market interest.
      Seeing the market sounding promotion and the meeting of two parties.
   e. Procurement of business entities that comply with goods / services procurement regulations.
   f. Agreement that contains how the pattern of return on investments.

4.5.3 Review of Investment Returns of Business Entities in the PPP Schemes. The return on investment of the Implementing Business Entity for the Provision of Infrastructure in the PPP Scheme is divided into 2 sources:
   1. Payment by users in the form of rates (User Payment)
      The PJPK (Person in Charge of Cooperation Projects) sets the initial tariff for infrastructure provision. Tariffs can be determined based on the level of ability of PJPK users to provide Feasibility Support so that the Implementing Business Entity can obtain a return on investment.
   2. Payment for service availability (Availability Payment).
The PJPK allocates funds for the payment of service availability for the provision of infrastructure carried out by the Implementing Business Entity during the operation period during the period stipulated in the Cooperation Agreement (PKS). The PJPK pays the Service Availability to the Implementing Business Entity if it meets the following conditions: The infrastructure in cooperation has been built and is declared ready to operate. The Minister / Head of Institution / Head of Region states that the infrastructure has met the infrastructure service indicators as stipulated in the PKS.

If the financial calculations carried out at the next stage of the study found that the income received during the concession period cannot be proportional to the investment costs incurred by the private sector, then the return on investment scheme should be carried out with payment for the availability of services (AP).

PPP with the AP scheme is the scheme most likely to be applied to projects that are established in non-commercial areas that allow income uncertainty to occur. Availability Payment includes the value of CAPEX, OPEX, and reasonable benefits for business entities (ROI).

The advantages of Availability Payment (AP) schemes for investors are:

1. Ease of Business Plan. Business planning is easier because the estimated income received by the Business Entity has been scheduled with an agreed level of return.
2. Demand Risk. The potential risk premium for business entities will be smaller because the demand risk is borne by the PJPK.
3. Business Certainty. The certainty of doing long-term business without thinking about demand and income
4. Private BUP KPIs. Key Performance Indicators (KPI) are measured from the Minimum Service Standards (SPM), so that Business Entities can focus on meeting service SPM. Number 12 of 2015 concerning Acceleration of Priority Infrastructure Preparation.

4.5.4 Result of OBC. The preparation of this initial feasibility pre-study (Outline Business Case / OBC) is to determine the feasibility of the Makassar - Maros - Sungguminasa - Takalar (Maminasata) Railway through the PPP scheme. According to the results of the OBC (Outline Business Case), the construction of the Makassar urban railway line and its surroundings (Maminasata) through the PPP scheme through payment by users in the form of tariffs (user pay) could not be implemented. The type of return on investment that is suitable for use is an Availability Payment. Regular payments by the Regional Head / Governor of South Sulawesi to the Implementing Business Entity for the availability of Infrastructure services by the quality and/or criteria as specified in the PPP Agreement.

5. Conclusion

It is believed that the Public-Private Partnership Scheme with Business Entities (PPP) is believed to be alternative financing that can improve infrastructure development and the efficiency of development implementation that creates the quality of a product and service in the distribution of capital and risk as well as the competence of human resource expertise together. It is hoped that the PPP Project in the development of the Maminasata Urban Railway Infrastructure can become a way out in Non State Budget / Regional Budget financing and become a solution following the National Mid-Term Development Plan (NMTDP) and Regional Mid-Term Development Plan (RMTDP) to achieve the construction of a 3258 Km railway line. The suggestion put forward in this study is that the government needs to establish a transportation management body that integrates all modes of transportation and manages commercial areas under the authority of the PJPK in increasing revenue for an investment return on Availability Payment (AP).
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