

# EX ANTE EVALUATION OF THE LIABILITY COMPANY POLICY OF STATE-OWNED ENTERPRISES (SOE) JASA TIRTA II IN THE ASPECT OF PUBLIC SERVICES USING THE COST BENEFIT ANALYSIS (CBA) METHOD

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**Abstract.** The changes in the global economy and competitive business growth demand increased efficiency, effectiveness, and professionalism in all business lines of SOEs, including Jasa Tirta II. In order to realize this, the Ministry of SOEs conducts SOE development, namely business model restructuring, including the stipulation of Government Regulation Number 113 of 2021 concerning Amendments to Government Regulation Number 25 of 1976 concerning State Capital Participation of the Republic of Indonesia for the Establishment of the Company (Persero) "Danareksa". The implication of the regulation is that the Jasa Tirta II Public Company as a company engaged in the field of water resources is included in the company that is planned to become a member of the Danareksa Holding so that it requires preparations to support the formation of the Danareksa Holding with the participation of state capital through the shift or transfer of shares in a subsidiary of a state-owned enterprise or a Limited Liability Company. Jasa Tirta II with the status of a business entity in the form of a Public Company certainly cannot shift or transfer shares, so Jasa Tirta II is considered necessary to change the status from a public company to a Limited Liability Company. Jasa Tirta II as a business entity assigned by the Government in terms of public benefit services in the field of Water Resources management, of course, this public service is one of the main activities that must be maintained by Jasa Tirta II. Therefore, there needs to be a study that specifically explores the possible impact of the policy of changing the status of business entities from public company to liability company with a point of view from the aspect of public services. The research conducted is an ex ante evaluation using an experimental quantitative approach that can be proven by the cost benefit analysis method. The stages is to identification the costs and benefits in the aspect of Jasa Tirta II's public services from the public company side and from the side if the business entity changes its form into a liability company, then processed by net benefit evaluation using the B/C Ratio and simulations the cost and benefit data for the next 10 years with an estimated Net Present Value (NVP) and Return on Investment (ROI). The net evaluation of benefits, which is a ratio to measure the benefits obtained by business entities, especially for the public service aspect of Jasa Tirta II from the side of public companies and the side of liability companies, obtained the result that from the side of public companies has more public service benefits of 2.64% compared to the benefits of public services from the side of liability companies which is 0.90%. As for the NVP simulation, it was found that the total net value of NVP from the side of the general company was Rp. 10,144,877,000,000,-, while the total net value of NVP from the side of the limited liability company was Rp. -827,508,000,000,-. And for the ROI simulation, it was obtained that the total net ROI for the public company Jasa Tirta II was 164%, while the total net ROI result if Jasa Tirta II was in the form of a liability company was -9.7%. Based on the results of the B/C Ratio, NVP and ROI simulations, it was concluded that Jasa Tirta with the form of a public company has a very positive impact and has greater public benefits from its public service aspect, while if the form of Jasa Tirta II business entity is a liability company, the benefits of public services have a negative impact or have not been maximized in fulfilling their general benefits.

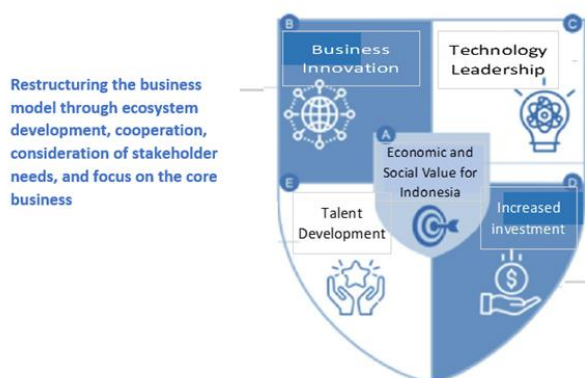
**Keywords:** public service; change in legal entity status; general company ; company; CBA; NVP; ROI

## I. INTRODUCTION

The Changes in the global economy and increasingly competitive business growth require increased efficiency, effectiveness, and professionalism in all lines of BUMN business, including Jasa Tirta II Public Company. In order to realize this, the Ministry of Stated Owned Enterprises (SOE) has developed a 2020-2024 roadmap which sets five priorities in SOE Development.

From Picture 1, it can be seen that one of the guidance carried out by SOE is the restructuring of the business model, which is supported by the government, one of which is

through the issuance of Government Regulation Number 113 of 2021 concerning Amendments to Government Regulation Number 25 of 1976 concerning the Investment of State Capital of the Republic of Indonesia for the Establishment of a Company (Persero) "Dana Reksa". The implication of the regulation related to Dana Reksa is that Jasa Tirta II Public Company as a company engaged in water resources is included in the company that is planned to become a member of the Dana Reksa Holding so that it requires preparation to support the formation of the Dana Reksa Holding.



Picture 1. Five Priorities SOE Development, 2020-2024

In Government Regulation of the Republic of Indonesia Number 44 of 2005 concerning Procedures for Participation and Administration of State Capital in SOEs and Liability Companies in Article 9 paragraph 1 letter d, mentioned "State Capital Participation in SOEs and Liability Companies is carried out in the context of company restructuring", which is then explained in Government Regulation of the Republic of Indonesia Number 72 of 2016 concerning Amendments to Government Regulation Number 44 of 2005 concerning Procedures for Participation and Administration of State Capital in SOEs and Liability Companies that "Restructuring in this provision is intended to improve the capital structure, such as quasi reorganization, reduction in the percentage of share ownership by the state as a result of the issuance of new shares that are not taken by the state (dilution), and shifting or transferring state-owned shares in SOEs or Liability Companies to other SOEs and / or Liability Companies as State Capital Participation, among others, in the context of the formation of SOE holding companies."

Based on this explanation, for the establishment of Danareksa holding, it is necessary to invest state capital by shifting or transferring shares in subsidiaries of SOEs or Liability Companies. Jasa Tirta II with the status of a business entity in the form of a Public Company certainly cannot shift or transfer shares, so Jasa Tirta II is considered necessary to change its status from Public Company to Liability Company.

The policy of changing the status of a business entity for Jasa Tirta II, which has not been determined by stakeholders, can be carried out by means of an ex ante evaluation, as stated by Wollmann (2007) ex ante evaluation is a policy evaluation carried out before the policy is determined and implemented to provide an initial assessment and anticipate the estimated impacts and consequences resulting from policy implementation. To support the ex-ante evaluation of the policy discourse on restructuring or changing the status of business entities, especially in Jasa Tirta II from Public Company to Liability Company in the aspect of public services, a method is needed that can provide analysis results to be taken into consideration for policy makers or stakeholders so that the policy to be taken is appropriate, by using cost-benefit analysis (CBA).

Conceptually, CBA is an analytical technique to assess the feasibility of a proposal. As much as possible quantified in

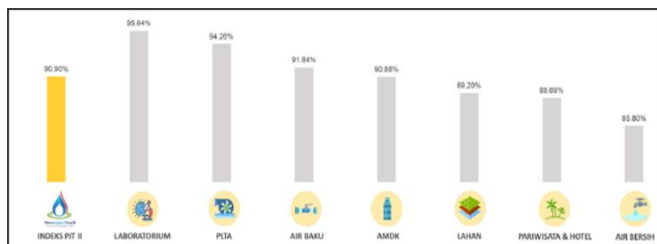
monetary language. It also includes things whose economic value is not satisfactorily measured by the market. So that the research results from the ex-ante evaluation with the CBA method are expected to be used as a consideration for stakeholders to determine the right business entity form policy for Jasa Tirta II in the aspect of public services..

## II. RESEARCH METHODS

The method used in this research is quantitative experimentation (Sanjaya: 2015, p. 37) which aims to explain and predict what will happen to a variable if a certain treatment is given to other variables. The first characteristic in the research method in this study is research data taken based on financial data from the annual report and financial statements of Jasa Tirta II in 2022 to identify the costs required to fulfill quality public services and the results of customer satisfaction surveys from companies selected by Jasa Tirta II to identify the benefits public services of Jasa Tirta II, then with the second characteristic, is the hypothesis related to the impact of changing the status of the business entity which will be proven by the Cost Benefit Analysis method by calculating the costs and benefits both from the existing side as Public Company and from the prediction side if there is a change in status to Liability Company based on public service standards for the Company in SOEs coupled with finding the net value of current benefits with Net Present Value (NPV) and the percentage of return (benefit) generated over a certain period as a result of investment based on the assumption that there are sustainable benefits from service results with Return of Investment (ROI).

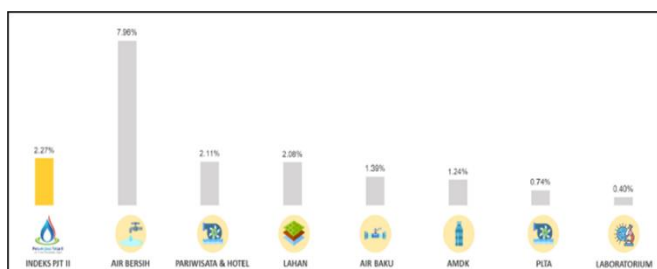
Primary data, is a data collected by researchers directly from the first source or where the object of research is carried out, such as Jasa Tirta II Public Company annual report data in 2022, Jasa Tirta II Public Company customer satisfaction and dissatisfaction survey final report data in 2022 and the results of interviews with customer satisfaction survey data processors at Jasa Tirta II by the Head of the Commercial and Customer Service Division of Jasa Tirta II Public Company to obtain data on customer satisfaction and dissatisfaction survey results and on aspects of public services carried out by Jasa Tirta II and the results of interviews with the Head of the Performance Control and Management System Division of Jasa Tirta II Public Company.

The results of the interview are that in the last few periods since 2020 Jasa Tirta II Public Company has carried out a Customer Satisfaction and Dissatisfaction Survey with a period every two times a year with the aim and objective of measuring the service performance of Jasa Tirta II Public Company through customer satisfaction scores and customer dissatisfaction scores covering all Regional Units of Jasa Tirta II Public Company. To support this research, the author gets the results of the Jasa Tirta II Public Company Customer Satisfaction and Dissatisfaction Survey which has been carried out by the selected vendor by PT Alvira Strategi Indonesia.



Source: Jasa Tirta II Public Company Customer Satisfaction and Dissatisfaction Survey Report. by PT Alvara Strategi Indonesia, 2022

Picture 2. Customer Satisfaction Index Jasa Tirta II Public Company Year 2022 per product/service



Source: Jasa Tirta II Public Company Customer Satisfaction and Dissatisfaction Survey Report by PT Alvara Strategi Indonesia, 2022

Picture 3. Customer Dissatisfaction Index Jasa Tirta II Public Company Year 2022 per product/service

Secondary data is data that has been collected for purposes other than solving the problem at hand. This data can be found quickly. In this study, secondary data sources are literature, articles, journals and sites on the internet related to the research being conducted. The secondary data for this study are data on interest rates, discounts, rewards (percent per year) from Bank Indonesia and data on Indonesia's economic growth in the fourth quarter of 2022 from the Central Statistics Agency.

#### Cost Benefit Analysis

According to Weimer (2018) in the context of public services, Cost-Benefit Analysis (CBA) is a method for measuring and comparing the benefits and costs of various public service programs or policies. The steps in conducting CBA for public services are:

Cost Identification of a business entity is also called Operating Expenses or Cost of Revenue listed in the Financial Statements, this is because operating expenses or cost of revenue are costs used by the company to be incurred by the company to support the running of a company.

#### Benefit Identification

In accounting concepts, benefit assessment for business entities can be more related to measuring the value or results produced by an activity or investment or income.

According to Dr. Anang Muftiadi, in the Padjadjaran University Business Administration lecture module, to identify the benefits of the program / policy into monetary units, things that need to be considered are as shown in Picture 4. below,



Picture 4. Identification of Program/Policy Benefits into Monetary Units by Dr. Anang Muftiadi

#### Measuring costs and benefits.

With the formulations above, the costs and benefits of the service aspects of a business entity can be measured both from the public company side and from the liability company side. Evaluation of net benefits

According to Fuguitt (1999: p.102) when setting a policy, the Benefit-Cost Ratio (B/C) is used to rank project or policy options.

An investment project or policy is said to be profitable if the comparison results in a value of at least 1 or  $B / C > 1$ . Benefit cost ratio (B / C Ratio) is a comparison between the net benefits of the years concerned that have been presented value (numerator is +) with net costs in the year where  $B_t - C_t$  (denominator is -) that have been presented value, namely gross costs > gross benefits. This criterion provides guidance that a project or policy will be selected if the Net B / C ratio > 1. Conversely, a project or policy will not be selected if the Net B / C ratio < 1.

With the concept of the theory above, after obtaining costs and benefits from the current service aspect, namely the costs and benefits of Jasa Tirta II Public Company, the costs and benefits of Jasa Tirta II in the Liability Company model are also calculated, then with the B / C Ratio it will be known which business entity option has greater benefits, so that the B / C Ratio comparison can be a consideration for policy makers to determine the right policy for the right form of business entity for Jasa Tirta II.

#### Report and decision making

With the results of the CBA method, it can then be concluded and a clear and detailed report on the findings can be made so that it can be a consideration for policy makers to support the decision-making process for the right form of business entity for Jasa Tirta II based on data and facts from the CBA calculation.

### III. RESULT AND DISCUSSION

#### Results of Cost Identification in Public Service Aspects

The identification between identification of costs for public services of Jasa Tirta II in the form of public company entity and if it changes to liability company, the results are obtained as follows:

#### 1.1. Results of Public Service Cost Identification of Jasa Tirta II Public Company

Table 1. Results of Public Service Cost Identification of Jasa Tirta II Public Company Processed by the author, 2024

Variabel	Indicator	Cost (Rp)
Direct Cost	1. Water Resources Cost:	
	- Electricity Cost	112.300.050.000,00
	- Raw Water Cost	404.471.230.000,00
	- Clean Water Cost	10.936.070.000,00
	2. Non Water Resources Cost :	
	- Tourism Cost	26.488.950.000,00
	- Land Utilization Cost	10.943.700.000,00
	- Laboratory Cost	9.155.300.000,00
	- Drinking Water Cost	4.688.020.000,00
	- Other Business Cost	21.287.990.000,00
Indirect Costs	1. Promotion and Marketing Cost	5.794.220.000,00
	2. General Administration Cost	187.159.970.000,00
	3. Financial Cost	2.760.560.000,00
	4. Other Cost	25.156.240.000,00
Total Cost of Public Service Jasa Tirta II Public Company		821.142.300.000,00

### 1.2. Results of Identification of Cost Assumptions of Public Services of Jasa Tirta II in the form of Liability Company

In the indicator of direct cost assumptions for the liability company public services, there are service costs that must be considered by the percentage of customer suggestions and criticisms per product/service from the 2022 Jasa Tirta II Public Company Customer Satisfaction Survey Results, with the following formula:

Public Service Cost Assumptions = percentage of customer suggestions and criticisms x cost

To get the total assumption of the cost of public services of Jasa Tirta II in the form of a Liability Company, first calculate the assumption of public service costs from the results of the percentage of customer suggestions and criticisms if Jasa Tirta II changes its status to a Liability Company and is obtained as follows:

Table 2 The Results of Identification of the Cost Public Service Assumptions from the Percentage of Suggestions and Criticisms Customers Jasa Tirta II

Product / Public Service Jasa Tirta II	The percentage of customer suggestions and criticisms	Cost (Rp)	Assumption of the cost of public services (Rp)
Raw Water	54,71%	404.471.230.000,00	221.286.209.933,00
Clean Water	77,96%	10.936.070.000,00	8.525.760.172,00
Land Utilization	51,01%	10.943.700.000,00	5.582.381.370,00
Electricity	51,87%	112.300.050.000,00	58.250.035.935,00
Laboratorium	52,93%	9.155.300.000,00	4.845.900.290,00
Drinking Water	54,72%	4.688.020.000,00	2.565.284.544,00
Tourism	42,22%	26.488.950.000,00	11.183.634.690,00
Total assumption of the cost public services			312.239.206.934,00

Processed by the author, 2024

So that the total assumption of the cost of public services of Jasa Tirta II in the form of Liability Company becomes,

Table 3 The Results of Identification Assumptions Cost of Public Service Jasa Tirta II in the form of Liability Company

Variabel	Indicator	Cost (Rp)
Direct Cost	1. Water Resources Cost:	
	- Electricity Cost	112.300.050.000,00
	- Raw Water Cost	404.471.230.000,00
	- Clean Water Cost	10.936.070.000,00
	2. Non Water Resources Cost :	
	- Tourism Cost	26.488.950.000,00
	- Land Utilization Cost	10.943.700.000,00
	- Laboratory Cost	9.155.300.000,00
	- Drinking Water Cost	4.688.020.000,00
	- Other Business Cost	21.287.990.000,00
Indirect Costs	3. Equity or Capital of the Company (49% of total equity as of January 1, 2022)	627.791.528,71
	4. Public Service Cost Assumption from Results Percentage of customer suggestions and criticisms	312.239.206.934,00
	1. Promotion and Marketing Cost	5.794.220.000,00
	2. General Administration Cost	187.159.970.000,00
Total Assumed Cost of Public Services Jasa Tirta II in the form liability company	3. Financial Cost	2.760.560.000,00
	4. Other Cost	25.156.240.000,00
Total Assumed Cost of Public Services Jasa Tirta II in the form liability company		1.134.009.298.462,71

Processed by the author, 2024

### 2. Results of Benefit Identification in Public Service Aspects

The results of the benefits identification in the public service aspect consist of identifying the benefits for public services of Jasa Tirta II in the form of Public Company and if Jasa Tirta II changes to Liability Company, so the identification results are obtained as follows:

#### 2.1. The Result of Public Service Benefit Identification of Jasa Tirta II Public Company

Tabel 4 The Result of Public Service Benefit Identification of Jasa Tirta II Public Company

Variabel	Indicator	Benefit (Rp)
Direct Benefit	1. Water Resources Revenue:	
	- Electricity Revenue	493.119.020.000,00
	- Raw Water Revenue	368.007.890.000,00
	- Clean Water Revenue	9.053.960.000,00
	2. Non Water Resources Revenue :	
	- Tourism Revenue	11.015.800.000,00
	- Land Utilization Revenue	67.510.750.000,00
	- Laboratory Revenue	7.934.390.000,00
	- Drinking Water Revenue	2.796.540.000,00
	- Other Business Revenue	21.608.790.000,00
Indirect Benefit	Non-business Income:	
	- Finance Income	13.639.940.000,00
	- Other Income	18.310.490.000,00
Competitif Benefit	Realization of Water Provision for the Rendeng and Gadu Planting Season 2022 amounting to 8,826.03 million m3 or IDR 1,154,532,984,300.	1.154.532.984.300,00
Total Benefits of Public Services Perum Jasa Tirta II		2.167.530.554.300,00

Processed by the author, 2024

#### 2.2. The Results of Identification by Assumptions Benefits of Public Services Jasa Tirta II in the form of Liability Company

Before getting the total assumption the benefits of public services of Jasa Tirta II in the form of Liability Company, it is necessary to calculate in advance for the assumption indicator of the potential Business Income of Jasa Tirta II if it changes its status to Liability Company against the Customer



Dissatisfaction Index that has not been fulfilled by Jasa Tirta II Public Company with the following formulation and results:  
 $\text{Potential Business Income} = \text{Customer Dissatisfaction Index} \times \text{Business Income}$

Table 5. The Results of Assumptions Potential Revenue from Customer Dissatisfaction Indeks (CDI)

Product/Service Jasa Tirta II	Customer Dissatisfaction Index (CDI)	Revenue (Rp)	Assumed Revenue Potential (Rp)
Raw Water	1,39%	368.007.890.000,00	5.115.309.671,00
Clean Water	7,96%	9.053.960.000,00	720.695.216,00
Land Utilization	2,08%	67.510.750.000,00	1.404.223.600,00
Electricity	0,74%	493.119.020.000,00	3.649.080.748,00
Laboratorium	0,40%	7.934.390.000,00	31.737.560,00
Drinking Water	1,24%	2.796.540.000,00	34.677.096,00
Tourism	2,11%	11.015.800.000,00	232.433.380,00
Total Assumed Potential Revenue from Customer Dissatisfaction Index			11.188.157.271,00

Processed by the author, 2024

the total assumption of the benefits of public services of Jasa Tirta II in the form of Liability Company is as shown in the table below,

Table 6. The Results of Identification by Assumptions Benefits of Public Services Jasa Tirta II in the form of Liability Company

Variable	Indicator	Benefit (Rp)
Direct Benefit	1. Water Resources Revenue:	
	- Electricity Revenue	493.119.020.000,00
	- Raw Water Revenue	368.007.890.000,00
	- Clean Water Revenue	9.053.960.000,00
	2. Non Water Resources Revenue :	
	- Tourism Revenue	11.015.800.000,00
	- Land Utilization Revenue	67.510.750.000,00
	- Laboratory Revenue	7.934.390.000,00
	- Drinking Water Revenue	2.796.540.000,00
	- Other Business Revenue	21.608.790.000,00
Indirect Benefit	3. Assumption of Potential Revenue from Customer Dissatisfaction Index from Jasa Tirta II in the form of Liability Company	11.188.157.271,00
	Non-business Income:	
	- Finance Income	13.639.940.000,00
	- Other Income	18.310.490.000,00
Total Assumptions Benefits of Public Services Jasa Tirta II in the form of Liability Company		1.024.185.727.271,00

Processed by the author, 2

## 2 Evaluation of Net Benefits with Benefit-Cost Ratio

After the costs and benefits can be identified, the next step is to calculate the Net Benefits from the Public Company side and the Company

Table 7. Results of Evaluation Benefits of Jasa Tirta II from the Public Company side and Liability Company side

Form of Jasa Tirta II Business Entity	Cost of Public Service (IDR)	Benefit of Public Service (IDR)	B/C Ratio (%)
Public Company	821.142.300.000,00	2.167.530.554.300,00	2,64
Liability Company	1.134.009.298.462,71	1.024.185.727.271,00	0,90

Processed by the author, 2024

## 3. Simulation Results of NPV and ROI Calculation

This research is made with projections in the next 10 years starting in 2022 which is year 0, Discount data from the Interest Rate Table, Discount, Reward (Percent Per Year) of 5.5% from Bank Indonesia and Indonesia's economic growth data in 2022 of 5.31% from the Central Statistics Agency of Indonesia.

In this study, each side of both Public Company and Liability Company will simulate the calculation of net present value in the life cycle flow of policies / activity programs / projects using Net Present Value (NPV) estimates,

Furthermore, it is also necessary to calculate the percentage of benefits compared to the costs incurred. This simulation explains the percentage of return (benefit) generated over a 10-year period as a result of investment, using ROI as a form of profitability to measure the company's ability with all invested capital, to generate profits (Ruliarsa), here ROI is used to find the results of profits / benefits from the public service aspect or the benefits of Jasa Tirta II public services.

### 1. NVP and ROI Jasa Tirta II Public Company

<b>OBJECT</b> : Public Service of Jasa Tirta II Public Company (in Million Rupiah)	
Cost of Public Service	821.142 IDR
Benefit of Public Service	2.167.531 IDR
B/C Ratio	2,64
Growth	5.31% per year (based on Indonesia's Economic Growth Data in 2022 from the Central Statistics Agency)
<b>CASHFLOW (FUTURE VALUE)</b>	
Unit	Year
Cost	0 1 2 3 4 5 6 7 8 9 10
Benefit	0 1 2 3 4 5 6 7 8 9 10
Net	0 1 2 3 4 5 6 7 8 9 10
Cumulative	0 1 2 3 4 5 6 7 8 9 10
Discount factor	5.5% (based on Discount data from the Table of Interest Rates, Discounts, Rewards (Percent Per Year) from Bank Indonesia)
NPV	1.00 0.95 0.90 0.85 0.81 0.77 0.73 0.69 0.65 0.62 0.59
<b>CASHFLOW (PRESENT VALUE)</b>	
Year	0 1 2 3 4 5 6 7 8 9 10
Cost	821.142
Benefit	2.167.531
Net	1.346.388
<b>FEASIBILITY</b>	
B/C Ratio	2,64 > 1
Return on Investment (ROI)	164.07% > 5-1
Net Present Value	10.144.887 +

### 2. NVP and ROI If Jasa Tirta II in the form of Liability Company

<b>OBJECT</b> : Public Service If Jasa Tirta II in the form of Liability Company (in Million Rupiah)	
Cost of Public Service	1.134.009 IDR
Benefit of Public Service	1.024.186 IDR
B/C Ratio	0,90
Growth	5.31% per year (based on Indonesia's Economic Growth Data in 2022 from the Central Statistics Agency)
<b>CASHFLOW (FUTURE VALUE)</b>	
Unit	Year
Cost	0 1 2 3 4 5 6 7 8 9 10
Benefit	0 1 2 3 4 5 6 7 8 9 10
Net	0 1 2 3 4 5 6 7 8 9 10
Cumulative	0 1 2 3 4 5 6 7 8 9 10
Discount factor	5.5% (based on Discount data from the Table of Interest Rates, Discounts, Rewards (Percent Per Year) from Bank Indonesia)
NPV	1.00 0.95 0.90 0.85 0.81 0.77 0.73 0.69 0.65 0.62 0.59
<b>CASHFLOW (PRESENT VALUE)</b>	
Year	0 1 2 3 4 5 6 7 8 9 10
Cost	1.134.009
Benefit	1.024.186
Net	-109.824
<b>FEASIBILITY</b>	
B/C Ratio	0,90 < 1
Return on Investment (ROI)	-9.78% < 5-1
Net Present Value	-827.508 -

In this sub-chapter of the study, researchers will describe the data that has been obtained from the stages and calculations using the cost benefit analysis method including

the results of data from the net benefit evaluation with the B / C Ratio, NPV and ROI.

Net benefit evaluation which is a ratio to measure the benefits obtained by business entities, especially for the public service aspect of Jasa Tirta II Public Company side and Liability Company side, the results show that the Public Company side has more public service benefits of 2.64% compared to the benefits of public services from the Liability Company side which amounted to 0.90%.

This is influenced by the fact that with the status of a business entity Jasa Tirta II Public Company received a government assignment in maintaining the stability of food security throughout West Java with a target of providing water for services to farmers in the 2021/2022 Rendeng Planting Season and the 2022 Gadu Planting Season of 8,826.03 million m<sup>3</sup>, so that the benefits obtained for the public or society are more.

Based on the results of the percentage of the B / C ratio that the benefits of public services if Jasa Tirta II Liability Company is 0.90 which means Net B / C < 1, while the percentage of the B / C ratio of Jasa Tirta II Public Company is 2.64 which means Net B / C > 1, so the author can recommend that the policy discourse on changing the status of business entities does not need to be done.

So does with the results of the NPV calculation on the public service aspect of Jasa Tirta II Public Company side, found that the total net NVP value up to year 10 or in 2031 is Rp. 10,144,877,000,000,-. Meanwhile, for the results of the NPV calculation on the aspect of public services if Jasa Tirta II changes its business entity form to become a Liability Company, it is found that the total net NVP value up to year 10 or in 2031 is Rp. -827,508,000,000,-.

Table 10. The Result of Jasa Tirta II Net NVP from Public Company and Liability Company (in millions of rupiah)

Form of Jasa Tirta II Business Entity	Net NPV (IDR)	Result
Public Company	10.144.887	NPV > 0, positive values
Liability Company	- 827.508	NPV < 0, negative values

With the Jasa Tirta II Public Company business entity form, the NVP results are greater than zero and positive, while Jasa Tirta II with the Liability Company business entity form gets NVP results less than zero and negative, so the recommended business entity policy for Jasa Tirta II is the Public Company business entity form.

Then on the results of the ROI calculation which measures the company's ability with the entire invested capital, to generate profits from the aspect of public services or the benefits of Jasa Tirta II services, it is found that the total net ROI for Jasa Tirta II Public Company in 10 years is 164%, while the total net ROI result if Jasa Tirta II is in the form of Liability Company for 10 years is -9.7%.

Tabel 11. The Result of Net ROI Jasa Tirta II from Public Company and Liability Company

Form of Jasa Tirta II Business Entity	Net ROI (%)	Result
Public Company	164	Positif Values
Liability Company	-9,7	Negative Values

In the ROI results, the Jasa Tirta II Public Company form of business entity benefits or profits from the public service aspect have a very positive impact, while if the form of the Jasa Tirta II business entity is Liability Company, the benefits or profits from the public service aspect have a negative impact

#### IV. CONCLUSIONS

One of the priorities of the Ministry of SOE in the 2020-2024 roadmap is restructuring or changing the form of business entities which is supported by the issuance of Government Regulation Number 113 of 2021 concerning Amendments to Government Regulation Number 25 of 1976 concerning Capital Inclusion of the Republic of Indonesia for the Establishment of Limited Liability Companies (Persero) "Dana Reksa". The implication of the regulations regarding Danareksa is that Jasa Tirta II Public Company is demand necessary to change its status from Public Company to Liability Company. The results of the ex ante evaluation using the cost benefit analysis method to predict or estimate the impact if the policy is implemented, it was found that based on the results of the B/C ratio percentage that the benefit of public services if Jasa Tirta II changed its business entity form to Liability Company was 0.90, which means Net B/C < 1, while the percentage of Jasa Tirta II Public Company B/C ratio is 2.64, which means Net B/C > 1, so it can be concluded that the policy discourse on changing the status of business entities does not need to be carried out.

This result is also supported by a simulation of the NVP and ROI calculations on the public service aspect of Jasa Tirta II which shows that with the Jasa Tirta II Public Company business entity form the NVP results are greater than zero and have a positive value, while Jasa Tirta II with the Liability Company form of business entity gets the results NVP is less than zero and is negative. Then for the ROI results, the form of the Jasa Tirta II Public Company entity has benefits or advantages from the public service aspect which has a very positive impact, whereas if the Jasa Tirta II business entity is formed as Liability Company, the benefits or profits from the public service aspect have a negative impact. Based on the NVP and ROI results, the author recommends that the appropriate form of business entity for Jasa Tirta II from the public service aspect is in the form of a Public Company business entity

In relation to public services for all users for Jasa Tirta II, even though it is in the form of a Public Company business

entity, it is hoped that Jasa Tirta II will always support and improve services with various service improvement innovations so as to create customer satisfaction and ultimately increase company profits.

The results of the cost benefit analysis if Jasa Tirta II is in the form of Liability Company, show that there is still an opportunity for the impact of public service benefits to be more positive, for example by reducing customer dissatisfaction and providing more public benefits..

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