

CHAPTER I

INTRODUCTION

A. Background

Water is one of the natural resources that important to human life. Water can also be used in all activities of life in the term of commercial and non-commercial. Water becomes a vital resource for human beings because any activity that is carried out cannot be detached from water, as for daily consumption, household needs, the needs of industry, agriculture, recreation and etc. From the situation then the capacity of clean water should be able to meet the needs of the society because clean water can easier for society activities and can reduce the spread of disease in the society.

The availability of clean water became the important thing in life there is factor that encourages the reduced capacity of clean water. Rate of population growth increased rapidly can be the factor in the reduced capacity of clean water. Indonesia is a country that has a lot of population and Yogyakarta City is one of the city that growing rapidly in line with progress in some sectors such as student city and tourist attractions, they are certainly increase a lot of newcomers to learn, business or sightseeing in Yogyakarta. Data obtained by Badan Pusat Statistika, population of Yogyakarta City in 2015 is 412.704 and in 2016 is 417.744 then from the increasing of the populations are absolutely also increasing the needs of clean water. It is certainly need of shelter and clean water enough.

Management of clean water services for the needs of Yogyakarta City community implemented by Tirtamarta Municipal Water Company (PDAM) Yogyakarta. PDAM Tirtamarta is a public service provider that has a role in clean water management for the benefit of the people in the area of Yogyakarta City. PDAM Tirtamarta as one of the Regional Owned Enterprises in Yogyakarta City needs to provide good service in an effort to increase customer or community's satisfaction as user in quality, quantity and continuity. Clean water service is an absolute perceived by the customers of PDAM. Similar to that perceived by PDAM in other urban cities, then problem that occur in PDAM Tirtamarta is water loss of level (Non-Revenue Water), this happened because of the existence of leaking pipes that make water wasted.

Regardless of the State of the water resources are declining in quality and quantity. In accordance with the constitutional guarantee in Article 5 Section 7 of 2004 regarding water resources, stated “The State ensures the right of every person to get water for the basic necessities of daily minimum to satisfy his needs, clean, healthy and productive”. Explicitly this section 7 shows that to be able to obtain clean water is the right for every person, citizen of a country, and no exception citizens in Indonesia. The guarantee responsibility between the Central Government and local authorities, including guarantees everyone to access a source of water to get water (Sanim, 2011)

According to President Director Tri Widodo, stated that almost 50% of the total existing pipeline network was so old, it caused water leakage. The total length of the PDAM Tirtamarta pipeline network reaches 18,500 km,

but there are some networks that have been almost a hundred years old since it was built in 1918 and 1925. The networks are prone to leakage so it needs to be gradually revitalized (Antara Jogja, November 17, 2012). The leakage of clean water distribution pipeline system in Yogyakarta can be caused by various things. Another factor caused water leakage based on President Director of PDAM Tirtamarta in Yogyakarta City, Dwi Agus Triwidodo revealed that in addition to the old pipelines, the cause of leakage is damage due to road construction. In the statement obtained 50% pipe owned PDAM, was already 50 years. In fact, there are pipelines built in the Dutch era (Solopos, November 13, 2012) Furthermore, PDAM Tirtamarta President Director, the existing pipe leakage is due to a broken pipe, then reduce 38 percent of the 550 liters of water we distribute to the community (Tribune Jogja, June 1, 2016).

Data obtained of PDAM Tirtamarta, until the end of the year 2016 the number of active customers PDAM Tirtamarta in Yogyakarta City is as much as 33.387 connections, while the number of customers household of PDAM Tirtamarta are 29.954 connections or 89.72% of total connections all customers in the Yogyakarta City.

The problem of a pipeline leak that occurred in the Yogyakarta City caused the wastage of water in useless, the improvement of pipeline facilities is a problem in almost every PDAM. The problem of pipeline leakage will be a problem that can happen every year, the only way out is to replace the damaged pipes with new pipes.

This research takes PDAM Tirtamarta that located in Yogyakarta City area because the researcher is interested in the population phenomenon that developed in Yogyakarta City which is comparable with the water requirement that also keep increasing. The phenomenon of groundwater basin in Yogyakarta is prone to water crisis, while deep well is one source of clean water for PDAM Tirtamarta with the number of wells reaches 28 units. Data from the Department of Public Works, Energy and Mineral Resources of DIY in 2011 recorded a decrease in groundwater level in Yogyakarta reaches 30 cm per year (Universitas Gajah Mada, 2 September 2016). Therefore, researchers would like to analyze willingness to pay for quality improvement, in this case, the replacement of leaking pipes with new pipes to reduce water loss in Yogyakarta City.

Quality improvement in this research is the replacement of leaking pipe into a new pipe. Quality improvement is included in non-market goods. Non-market goods are a group of goods and services whose quantity or quality are not traded in the market, and also have no explicit monetary value in currency units or have no price market, so need for identification of non-market goods in order to place the monetary value on the goods (Patunru et.al, 2004). The method of economic valuation for non-market goods in this research used contingent valuation method (CVM).

According to Yakin (1997) the superiority in CVM is the only technique for estimating the benefits that can be applied to various contexts to assess environmental policies and can be used in assessing environmental

conservation and environmental policies. The CVM method allows that all commodities not available in the market, where all these commodities have no economic value, but with this model makes all commodities that are not available in the market have economic value, and can be measured. Thus the economic value of a public good can be measured using willingness to pay (WTP).

A previous research related with quality improvement of water is obtained from Saptutyningsih (2007) by the title "Faktor-faktor yang Berpengaruh Terhadap Willingness to Pay untuk Perbaikan Kualitas Air Sungai Code di Kota Yogyakarta". This research also includes non-market goods and to know values in this research used contingent valuation method (CVM). The factors considered in this research such as gender, number of children in family, income, duration of stay, activities in the River and the level of water quality of the River. The result shows that gender, the number in the family, income and activities in the River influence on their willingness to pay for water quality of the River.

Other research associated with willingness to pay can be seen from Irawan (2009) by the title "Willingness to pay and Ability to Pay Pelanggan Rumah Tangga sebagai Respon untuk Pelayanan Air Bersih dari PDAM Kota Surakarta". This research applied contingent valuation method (CVM). This research shows that the WTP value is relatively small and the ATP value is about 20% on average below the water bill they paid. Variable

significantly are education, family income, and variable that not significantly are the total member of family and categorized of household.

Research related from Nugraheni (2013) by the title “Kesediaan Membayar Pelanggan Rumah Tangga untuk Pelayanan Air Bersih dari PDAM di Kabupaten Badung” are obtained by logistic regression analysis with the result that willingness to pay to clean water connections on the consumer household in each area of Badung Regency and the factors that influence affecting are the number of the family members, the quantity and quality of water, the total income of the family and the ownership of water sources other than the PDAM connection. While the factors that do not affect the willingness to pay for clean water from PDAM is the level of education.

This research discusses the existence for quality improvement of PDAM Tirtamarta and to analyze the willingness to pay for quality improvement. By looking at the economic analysis in the investment planning of the quality improvement of pipe leakage it is required to replace the pipe, so in this research would like to analyze the willingness of the household customer for the installation of new pipes for the quality improvement of PDAM Tirtamarta and the factors that influence it. From the previous research the variable and factors suspected to affect WTP include are family income, education, house ownership, the family members, water quality, and customer satisfaction.

B. Scope and Research Limitation

The scope and limitations of this research conducted in the Yogyakarta City. The respondents are household customers who live in Yogyakarta City and using PDAM Tirtamarta for source of water. This research focused on the willingness to pay (WTP) for quality improvement of PDAM Tirtamarta and factors in this research that are family income, education, house ownership, the family members, water quality, and customer satisfaction.

C. Formulation of Research Problems

Based on explanation above, so outline of the problems in this research are as follows:

1. How much estimated value of willingness to pay for quality improvement of PDAM Tirtamarta in Yogyakarta City?
2. What are the influences of family income, education, house ownership, the family members, water quality, and customer satisfaction on willingness to pay for quality improvement of PDAM Tirtamarta in Yogyakarta City?

D. Research Purposes

Based on introduction and the formulation of the research, then the purposes in this research are as follows:

1. Measuring the magnitude value of willingness to pay for quality improvement of PDAM Tirtamarta in Yogyakarta City.

2. Identify the influences of family income variable on willingness to pay for quality improvement of PDAM Tirtamarta in Yogyakarta City.
3. Identify the influences of education on willingness to pay for quality improvement of PDAM Tirtamarta in Yogyakarta City.
4. Identify the influences of house ownership variable on willingness to pay for quality improvement of PDAM Tirtamarta in Yogyakarta City.
5. Identify the influences of the family member variable on willingness to pay for quality improvement of PDAM Tirtamarta in Yogyakarta City.
6. Identify the influences of water quality variable on willingness to pay for quality improvement of PDAM Tirtamarta in Yogyakarta City.
7. Identify the influences of customer satisfaction variable on willingness to pay for quality improvement of PDAM Tirtamarta in Yogyakarta City.

E. Benefits of the Research

The existence of this research hopefully can give benefits are as follows:

1. For local governments to consider in making decisions to pay attention to the welfare of the community in accessing clean water.
2. For PDAM Tirtamarta as a recommendation for the ability of willingness to pay of society for quality improvement in the area of the research.

3. For researcher expected this research useful in the application of science that has been obtained and can be applied to the problems in the area of research.
4. For academics as reference material in the research of some kind or literature review that related to water resources.