

Public-Private Partnership (PPP) to Improve the Drinking Water Supply System: A Study on the Regional Government of East Java Province

Ikmal Putra¹, Hermawan Hermawan^{2*}, Andy Fefta Wijaya³

^{1,2,3} *Public Administration Department, Faculty of Administrative Science, Universitas Brawijaya, Indonesia*

**Corresponding Author's Email: hermawanfia@ub.ac.id*

Abstract

The management of the drinking water supply system is one of the priorities for successful regional development. There have been many efforts to improve the quality of drinking water management, yet the results are still suboptimal. This study aimed to analyze the good governance in the Public-Private Partnership (PPP) to improve the quality of the drinking water supply system in Umbulan, East Java, Indonesia. This study was qualitative involving informants from related government offices. Data were collected through interviews, documentation, and observations. Findings confirmed the high community needs for drinking water that the government could not completely fulfill due to limited funds. Thus, the government needed support from the private sector. In addition, the potential of the Umbulan water spring as a source of drinking water had not been fully explored. If the government continues the partnership, it is important to have uniform perceptions with the private partners. The partnership also needs to involve all stakeholders, including policymakers and the community, to ensure that aspirations from all parties are well channeled. Continuous supervision must also be done on the partnership to maintain service quality and compliance with regulations.

Keywords: coordination, partnership, private sector, drinking water supply system

I. INTRODUCTION

Drinking water has been gaining more attention worldwide, not to exclude in Indonesia, due to its decreasing quality and quantity (Morrison, Jason, and Gleick, 2004). For example, big cities in Indonesia, such as Jakarta, are faced with polluted surface water. In addition, 59.6% out of 374 Local-Owned Drinking Water Enterprises (*Perusahaan Daerah Air Minum – PDAM*) do not show good performance. The local governments also seem to have low management skills, commitment, and professionalism. The government of Indonesia plans to improve access to quality drinking water from 87.75% in 2019 to 100% in 2024. It also aims to improve the piping system from 20.14% in 2019 to 30% in 2024. Water loss is expected to decrease from 33% in 2019 to 25% in 2024. The Medium-Term Development Plan of Indonesia states that funding for such

improvements of the drinking water supply system comes from the State Budget (77.9%), the Public-Private Partnership scheme (29.9%), and the Local Budget (15.6%).

The government has implemented some policies and strategies to solve national drinking water issues. One of the steps taken by the government is funding the Drinking Water Supply System (*Sistem Penyediaan Air Minum – SPAM*) using the Public-Private Partnership scheme or other alternative funding. The government also facilitates the establishment of SPAM using the state and local budget by applying Prime Drinking Water Zones (*Zona Air Minum Prima – ZAMP*). It is expected that tap water will be available at every household and public place within the next five years. One of the projects the government encourages to solve drinking water issues is SPAM that uses raw water from local water sources (The

Ministry of Public Works and Public Housing of Indonesia, 2020; Agnes Yasa, <https://ekonomi.bisnis.com>).

Drinking water is a universal need and a global issue. However, there have been no international minimum standards or criteria for its management that can guide countries worldwide. The criteria for developing drinking water facilities depend on the national or regional needs, including the social, economic, and customs of the country or region. There has been increasing demand for the amount of drinking water annually, and it is the government's responsibility to fulfill all the needs of the community. Policy implementation on the drinking water system and sanitation will run well if the policy is made based on public needs and interests (The National Development Agency of Indonesia, 2003). These strategies will run well if the central government, the local government, stakeholders (the private sector, non-government organizations), and the public play their roles accordingly. Intensive coordination and solid cooperation are needed to reach success in developing drinking water facilities for the welfare of the public.

Developing coordination and its effectiveness within the context of public administration means driving the management system, organization, and all its equipment to achieve goals. Public management can function as public planning, actuating, controlling, coordinating, and leading (Syafiie, 2006). SPAM and PDAM are where administration happens—represented by relationships among individuals and groups within and outside the organizations and cooperation and division of work to reach the common goals (Syafiie, 2006).

New Public Management (NPM) paradigm emphasizes the principle of governance with sharing between stakeholders (the government, the private sector, and the community) in realizing a good government system, including developing infrastructure. The World Bank (2014) states that 1% of the economic growth is affected by 1% of infrastructure development. Investment in infrastructure significantly and

positively affects the economy. The problem is this increasing infrastructure demand is not supported by the ability of the government to fund such infrastructure development—it seems that the government's funding ability decreases each year. Thus, alternatives must be found to fund infrastructure development through the Public-Private Partnership (PPP), where the government encourages the private sector to provide public goods and services. Within PPP, the private sector principles in business management are applied in the public administration sector.

This Public-Private Partnership (PPP) scheme aims to encourage the private sector in developing public infrastructure through the following activities: (a) private investment to fund the development of public infrastructure, (b) improvement in natural resource management and public services, (c) technology adoption, and (d) improvement in operational efficiency. The World Bank has studied 22 developing countries from 1990 to 2008 to know how they implemented PPP (Chandan, Sharma, 2012:156). Compared to those countries, Indonesia is unable to make significant progress related to economic growth. The 2008-2009 Global Competitiveness Report places Indonesia in rank 86 out of 134 countries, far behind Malaysia (23), Thailand (29), China (47), India (72), Sri Lanka (65), and Pakistan (85). Indonesia's infrastructure is predicted to make no significant changes, although some breakthroughs have been made. It seems that electricity will become the priority to develop, followed by roads, especially tolls, but other infrastructures seem to be left behind other countries' development. Telecommunication is the best-developed infrastructure because it is supported by cellular technology. Infrastructure for the public that must be prioritized, such as irrigation, sanitation, drinking water, and mass transportation, even gets the least attention. Infrastructure development in Indonesia requires vast investment. The 2010-2014 infrastructure development projects needed IDR 1.429 trillion, with only IDR 451 trillion (31%)

can be funded by the government. Thus, the government must find another fund source, and the private sector can fill this gap (The Coordinating Ministry for Economic Affairs, 2010).

The involvement of the private sector in public infrastructure development emerges new concepts on cooperation between the government and the private sector, such as BOT (Build operate Transfer), BOO (Build Own Operate), BROT (Build Rent Operate Transfer), joint operation, merger, asset swaps, and so on. This coordination is important to realize the goal of national development for the welfare of all citizens. Cooperation and partnerships in Indonesia are regulated in Government Regulation Number 44 of 1997. The regulation defines partnership (*kemitraan*) as cooperation between small and medium or big enterprises in which the bigger enterprises guide and develop the smaller ones by considering mutual benefits and profits.

Build Operate and Transfer (BOT) is the most widespread practice cooperation form in Indonesia. The model is regulated in Government Regulation Number 38 of 2008 as an amendment to Government Regulation Number 6 of 2006 on the Management of Regional Inventory. The regulation explains that BOT is the utilization of state or local land by other parties, in which those parties build buildings and/or infrastructure and facilities used by those parties within a certain agreed period, and the buildings and/or infrastructure and facilities will be subsequently handed over after the agreed period expires. Infrastructure projects under the BOT scheme are considered the most effective due to the limited fund of the government. With such a scheme, infrastructure development continues with the help of the private sector without the government losing its asset.

The government has been making many efforts to solve the issue, yet there seem no significant results. Thus, the government must find alternatives to tackle the issue of the drinking water supply system to support the city or region's development. One of the alternatives

offered by PDAM Surabaya to improve service quality is by increasing its production capacity from Umbulan spring water in Pasuruan to 330 liters/second. However, the alternative is difficult to do because of the complex procedure to gain a permit. As such, this alternative cannot be realized and has remained a plan since 2008 (Nurdin et al., 2015).

It is the responsibility of the local government to provide quality drinking water for the public with sufficient quantity, especially the people of Pasuruan, Sidorajo, Surabaya, and Gresik. There is spring water with good quality water and a high water discharge of 5,000 liters/second. The water from the spring fulfills the standard of quality drinking water set by the Ministry of Health. Based on the explanation, we were interested in studying the Public-Private Partnership of the drinking water supply system in Umbulan.

II. THEORETICAL FRAMEWORK

CLEAN WATER SERVICE

One of the local infrastructure issues is drinking water as one basic need of humans and other beings. The 1992 International Conference agrees to pay more attention to water management.

Chapter 33 of the 1945 Constitution mandates that water is managed by the state and is used for the welfare of all citizens of Indonesia. Chapter 3 of Law Number 7 of 2004 on Water Resource mentions that water resources must be managed thoroughly in an integrated manner based on the eco-friendly principle for the welfare of all people. Water resources must be managed carefully to balance supply and demand to fulfill the basic and strategic needs of the country. The government targeted to reduce half of the total number of people having no access to water resources in 2015. In that year, 68.87% of Indonesian citizens must have had access to water resources, yet only 55% can be achieved (Gunawan, 2012).

Sustainable water management must be done through a Demand Responsive Approach (Sara and Katz, 1998). This approach puts the people

on top priority in decision making for the system to be built, the funding scheme, and the management practice (The National Development Agency, 2003). This approach led to the emergence of community-based water management in rural areas, in which an organization to manage water resources is formed representing the rural community. An example of such rural organizations is the Association of Drinking Water Users (*Himpunan Pemakai Air Minum – HIPPAM*) as the management body for the drinking water supply system in rural areas. Thus, water management in rural areas is sustainable. The resources the government has are not enough to build the drinking water facility and infrastructure. There are two main issues to realize: (a) fund sources—there need alternative sources of funds for construction, operation, and maintenance, and (b) human resources—there needs human resource empowerment at all levels.

The community and households must be involved to improve the drinking water supply system and environmental health. Improvement in the drinking water supply system will help promote environmental health.

COLLABORATION

This partnership would be analyzed under the context of collaboration. Collaboration of different sectors is a new form of partnership among sectors with power, resources, ideas, principles, authorities, and skills to collectively solve public issues (Wassihun et al., 2018). This collaboration of different sectors is influenced by its underlying relationship, including commitment, responsibilities, communication, and experience.

The partnership analysis is based on the theory developed by Forrer, Kee, and Boyer (2014) on the importance of understanding the reasons behind the partnership. Before analyzing the partnership, issues related to government capacity and management of different interests must be considered. Government capacity is related to the knowledge needed in partnership, the capacity the government has but the private sector does not and vice versa, and the existing

knowledge gap. Management of different interests deals with the overall objectives of the partnership project and the interest the private sector has over the partnership.

The partnership theory by Forrer, Kee, and Boyer (2014) mentions six elements of the partnership. The *first* is risk allocation that refers to understanding the extent of partnership and sharing risks among partners. The *second* is benefit analysis to measure the impact of the project on the partnership between different sectors. The *third* is the sociopolitical impact of the partnership to anticipate public and political rejection that may cause failure in partnership. The *fourth* is skills. Because the partnership project aims to serve the public, the needed skills are related to developing and monitoring relationships in the partnership. The *fifth* is partnership collaboration, in which the relationship within the partnership project depends on the effective management of that partnership. The *sixth* is performance measurement, including measurement of indicators and performance targets as a form of evaluation to assess the extent to which the partnership is beneficial for public service.

III. RESEARCH METHOD

RESEARCH DESIGN

This study was qualitative because it aimed to examine the PPP scheme within the good governance context to improve the drinking water supply system. Wahab (2002) states that a qualitative method is suitable to be employed when we want to capture a complete picture of the results of policy implementation.

RESEARCH LOCATION

Any sites fulfilling the substantive and theoretical interests of researchers can be used as a study site (Bogdan and Taylor, 1992). It is, however, easier to choose a site that fulfills the substantive interest of researchers. Referring to our interest to develop a substantive theory from the policy implementation on good governance to support the Public-Private Partnership Project in the Umbulan Drinking Water Supply System to improve system

quality and considering the research problems and the uniqueness of the PPP scheme, then choosing East Java was the best choice because the province had the characteristics needed in the study.

The Public-Private Partnership Project in the Umbulan Drinking Water Supply System was chosen for the following reasons: (a) the project was chosen as a national showcase project; (b) it provided drinking water for five regencies in East Java; (c) the project had created such an argument among stakeholders for quite some times before it was realized in 2015.

RESEARCH FOCUS

Based on the research problems and considering issues in implementing good governance to support the Public-Private Partnership Project in the Umbulan Drinking Water Supply System to improve system quality, this study focused on the partnership between the government and the private sector. It emphasized: (a) risks in the partnership, (b) costs and benefits of the partnership, (c) the social and political impact of the partnership, (d) the skills and capacity needed in the partnership, (e) control in the partnership, (f) collaboration in the partnership, and (g) performance assessment.

RESEARCH DATA

Qualitative data refers to the raw material collected by researchers from various studies—they contain certain data forming the basis of the analysis (Bogdan & Bilken, 1982). Data in this present study included interview transcripts and field notes on the results of observations. The data also came from secondary sources like photos, official documents, notes, archives, minutes of meetings, monographs, bulletins, and articles. Following the research focus, some data in this study came from events—the event referred to the implementation of the Public-Private Partnership in the Umbulan Drinking Water Supply System. Because the event had taken place, we could not get ourselves involved in the project. As such, we needed people who were involved in the project. Other events observed were the drinking water system service and how it related to other events. The

analysis of events follows Miles and Huberman (1992) by building a coherent narrative into a meaningful plot.

RESEARCH INFORMANTS

Informants are people who can help researchers to find the data needed. At the early stage of the study, informants were chosen by considering the setting, actors, events, and processes according to the framework and formulation of the problem (Miles & Huberman, 1992). The next step in selecting informants is the snowball sampling technique (Sugiono, 1993).

The informants of this present study were: (a) PT Air Bersih of East Java, (b) Head of Creative and Regional Infrastructure Sub-Sector, Regional Development Planning Agency of East Java, (c) Head of the Public-Private Partnership and Strategic Project Infrastructure, Bureau of Development Administration, Regional Secretariat of East Java, (d) Head of Regional Business Empowerment Division of the Investment and One-Stop Service of East Java, (e) PDAM Surabaya City, and (g) PDAM Pasuruan City.

DATA COLLECTION

This study was concerned with data from observations and interviews with various research informants—as such, data collection required careful planning because the process involved humans with various characteristics and understanding. We used Loflan's (1984) suggestions on how to enter the research area to avoid misunderstandings on our presence—the suggestions were getting along and data logging.

The data collection method used in this research was in-depth interviews, observations, and documentation. Interviews were done by asking informants to answer questions on the interview guide in a written form. Observations were done on formal occasions in which we directly presented on such occasions. We did this under the assumption that the observed phenomena could be not original or not following the formality (Yin, 1997). Documentation was done by choosing documents relevant to the research

focus, such as minutes of meetings, administrative requirements, and others.

DATA ANALYSIS

Data were analyzed in two stages: during data collection in the field and after data collection. Data analysis during the field study was carried out continuously without waiting for the data collection process to finish. After the data collection process finished, data were analyzed again by comparing with previous data from the field study. Data analysis during data collection included the following steps: (1) decision making to limit the scope of the study, (2) decision making regarding the data type to obtain, (3) developing analytical questions, (4) planning the next stage of data collection by considering results of previous data collection, and (5) writing down comments from observers on the data collected (Bogdan and Biklen 1982).

Data analysis after data collection includes the following stages: (1) developing coding categories with a coding system determined later, and (b) developing a working mechanism for the collected data. According to Moleong (1993), this data analysis process will help reveal the phenomena supported by strong data. If the collected data are considered insufficient to answer the research problems, then new data are needed. Suppose the existing data are not supported by other data, so conclusions cannot be drawn. In that case, the existing data must be reduced or eliminated, and researchers must look for other data. This data analysis is done continuously, so researchers work back and forth between data collection, data display, data reduction or addition, and conclusion drawing. The next step after data collection and analysis is checking data validity.

DATA VALIDITY

Validity in qualitative research is maintained in line with research activities, from preparation to writing the research report. An examination technique based on certain criteria is needed in determining data validity. The criteria are credibility, transferability, dependability, and confirmability (Lincoln and Guba, 1985;

Moleong, 1993). The four criteria are as described below.

Credibility is ensured by taking the following steps: (a) persistence in observing the phenomenon studied and (b) triangulation. Triangulation is a technique for checking data validity by utilizing various sources outside the data as a comparison.

Transferability can be achieved by providing clear, deep, and complete explanations to ensure that the sender and receiver of information or data work in the same context. We ensured our data conformed with the validity by transferring data on the Umbulan project to be checked and corrected by the officials and the public. Thus, we were responsible for providing sufficient data. Whether the data or findings would be applicable in the Umbulan project in the future depends on the decision of the readers or data users.

Dependability can be achieved through careful examination of all components of research processes and research results. We always discussed the data obtained with our supervisors, including the research process and data interpretation.

Confirmability in this study went simultaneously with dependability—the difference lied in the orientation of the assessment. Confirmability is used to assess the results (products) of research, especially those related to the description of research findings and discussion. Dependability is used to assess the research process, from data collection to writing a well-structured report. Dependability and confirmability will help research results meet qualitative research standards: truth value, applicability, consistency, and neutrality.

IV. FINDINGS AND DISCUSSION

The study analyzed findings using the partnership theory by Forrer, Kee, and Boyer (2014), consisting of six elements of the partnership. The *first* is risk allocation that refers to understanding the extent of partnership and sharing risks among partners. The *second* is benefit analysis to measure the impact of the

project on the partnership between different sectors. The *third* is the sociopolitical impact of the partnership to anticipate public and political rejection that may cause failure in partnership. The *fourth* is skills. Because the partnership project aims to serve the public, the needed skills are related to developing and monitoring relationships in the partnership. The *fifth* is partnership collaboration, in which the relationship within the partnership project depends on the effective management of that partnership. The *sixth* is performance measurement, including measurement of indicators and performance targets as a form of evaluation to assess the extent to which the partnership is beneficial for public service.

THE UNDERSTANDING OF THE COLLABORATING PARTIES ON THE EXTENT OF PARTNERSHIP AND SHARING RISKS IN THE PUBLIC-PRIVATE PARTNERSHIP PROJECT OF THE UMBULAN DRINKING WATER SYSTEM

It is necessary to study and understand business risks so anticipation can be made to face difficult or unexpected situations. The risks in the Umbulan PPP Project can be divided into three based on the collaborating parties: the company (private sector), the government, and the society. Business risk mapping will reduce production costs. Bernt and Hansson (1991) suggest that improving infrastructure services through partnerships can reduce production costs. The availability of infrastructure services has been proven to reduce the cost of production factors (Morrison and Schwatz, 1992). Norton (1992) shows that infrastructure in the telecommunications sector has a positive and significant impact on economic growth.

To sum up, these previous studies confirm that investment in infrastructure through partnerships positively impacts the economy and can reduce risks. Parente (2006) defines a Public-Private Partnership (PPP) as “an agreement or contract between a public entity and a private party, under which: (a) private party undertakes government function for a specified period of time, (b) the private party

receives compensation for performing the function, directly or indirectly, (c) the private party is liable for the risks arising from performing the function and, (d) the public facilities, land or other resources may be transferred or made available to the private parties.” PPP is carried out based on the principles of fairness, openness, transparency, and competition.

With procurement that prioritizes transparency and competition, the benefits that can be achieved are (a) increasing public acceptance of the Umbulan PPP Project, (b) increasing the ability of financial institutions to provide financing without sovereign guarantees, (c) reducing the risk of project failure, (d) being able to attract highly experienced and high-quality bidders, and (e) preventing government officials from practicing corruption, collusion, and nepotism.

COSTS AND BENEFITS

A product or service business, including a drinking water company, generally has a certain goal to be achieved, which is optimal profits from business activities. The return on the invested capital can provide additional capital (new investment). The income and profits obtained are used to survive and maintain sustainability, including paying employees properly (Kasmir, 2008). In the context of partnership financing, financial ratios can be used to evaluate the financial condition and performance of the company.

In practice, the costs incurred in managing the Umbulan PPP Project must be calculated to achieve BEP (Break-Even Point). As such, the management company of the Umbulan Drinking Water Supply System can return its capital and receive profit sharing. However, the benefits for the government and the community should also be a top priority. The Umbulan PPP Project will provide mutual benefits in terms of better quality, quantity, and continuity of service, while the business entity bears the investment costs. The inclusion of the private sector in government projects has led to many cooperation contracts between the government and the private sector. This collaboration is

hoped to bring a good impact on investment and improve service quality. However, this cooperation can also lead to problems because of the different interests between the government and the private sector; the government's interests are social service, while the private interests are profit-oriented.

THE SOCIAL AND POLITICAL IMPACT

The social and political impacts are the perceived implications of the Umbulan PPP Project. The Umbulan PPP Project may damage the existing infrastructure due to the installation, maintenance, and repair activities. Economic and environmental impacts for sustainable development were also confirmed in the interview results. Thus, social and political impacts and economic and environmental impacts have been detected from the results of the interviews. It follows the triple bottom line concept that balances social and political benefits, economic and environmental impacts as a sustainable development effort.

CAPACITY

Capacity is needed from the Umbulan PPP Project. Relevant parties have also discussed the required capacity with other parties outside their respective institutions. The objectives of private sector participation in infrastructure for capacity building include (a) seeking private capital to cover the large capital required for public service infrastructure investment, (b) improving natural resource management and service facilities, (c) transferring technology transfer, (d) expanding and developing services for customers, and (e) improving operating efficiency. It follows the objectives of development planning: sectoral development and regional development (Tarigan, 2004). Sectoral development focuses on superior sectors.

CONTROL

Government or public control over the partners is necessary, not to exclude in the Umbulan PPP Project. The control ensures the followings: (a) it is important for all parties to understand the mission, functions, duties,

rights, obligations as development actors; (b) unified perceptions, openness, commitment from development actors in partnership activities are needed to achieve mutually beneficial results; (c) direct involvement of all parties, especially the regional government, members of the Regional House of Representative, the community, employees, and others are crucial; (d) relevant and correct data must be accessible; (e) there must support to decision-makers at the central, provincial, and regional levels; (f) there must be transparent and consistent requirements criteria for private partners; and (g) there must be clear structure and duties of the negotiation team, and the team must master legal, technical, and financial matters.

The World Bank (in Mardiasmo, 2004) defines good governance as an implementation of solid and responsible development management in line with the principles of democracy and efficient market, avoidance of misallocation of investment funds, and prevention of corruption, both politically and administratively, implementation of the controlled budget, and creation a legal and political framework for business activities. This definition shows that control is carried out to fulfill the principle of accountability in this governance perspective.

COLLABORATION

Collaboration is related to trust in work partners in the continuity of the Umbulan PPP Project. Stakeholders participating in this project had sufficient trust for the sustainability of the project. This partnership was analyzed in the context of partnership collaboration. Wassihun et al. (2018) revealed that collaboration of different sectors is new—it is a partnership among sectors with power, resources, ideas, principles, authorities, and skills to collectively solve public issues. This collaboration of different sectors is influenced by its underlying relationship, including commitment, responsibilities, communication, and experience.

Based on the theory developed by Forrer, Kee, and Boyer (2014), this partnership study suggests the importance of understanding the

reasons for partnerships. There are also several issues to address before the partnership starts, including the capacity of the government and the management of different interests. Government capacity is related to the knowledge needed in partnership, the capacity the government has but the private sector does not and vice versa, and the existing knowledge gap. Management of different interests deals with the overall objectives of the partnership project and the interest the private sector has over the partnership.

PERFORMANCE INDICATORS

Performance indicators and performance targets and the achieved results should be a key factor in supervision and control. Performance measurement was carried out in the early stages, yet it was not explained in detail. Performance measurement is the main controlling tool for the sustainability of the Umbulan PPP Project. Performance measurement is also a governance tool in ensuring that the partnership goes on the right track. According to Effendi (2002), governance contains democracy, fairness, transparency, the rule of law, participatory and partnership elements. Perhaps the definition formulated by IIAS (International Institute for Asian Studies) is the most appropriate to capture this meaning, “the process whereby elements in society wield power and authority, and influence and enact policies and decisions concerning public life, economic and social development.” UNDP (1997) identifies five characteristics of good governance: (a) interaction, (b) communication, (c) self-reinforcement process, (d) dynamic, and (e) dynamic interdependence between government, market forces, and civil society. The five characteristics of good governance reflect the occurrence of a decision-making process involving stakeholders by applying the principles of good governance. Mustopadidjaja (1997) in Sedarmayanti (2009) writes that the principles of good governance are democracy and empowerment, service, transparency and accountability, participation, partnership, decentralization, and policy consistency and legal certainty.

Related to PPP, ADB (Asian Development Bank) states that the government has limited ability to allocate budget for infrastructure development so that the government can build infrastructure through PPP, VGF (Viability Gap Funding), or unsolicited financing schemes. These schemes will run well if supported by good governance in project management. Good management will help the government to solve the problem related to funding.

V. CONCLUSION

Based on the findings and discussion, the following conclusions are presented. *First*, the Umbulan PPP Project is realized for the following considerations. (1) The government is responsible for providing quality drinking water for the public. (2) However, the government has limited funds. (3) The high demand for quality drinking water cannot be completely fulfilled by the government. (4) The potential of Umbulan spring water has not been fully utilized. The Umbulan PPP Project represents cooperation between the government and the private sector. The cooperating parties complement each other related to (a) funding, (b) skilled and professional human resources, (c) effective and efficient managerial system, (d) advanced technology in drinking water management, (e) quick decision-making systems, and (e) simple regulations. In its implementation, the Umbulan PPP Project has three main different interests: (a) different authorities in spring management, (b) different tariffs for drinking water services, and (c) different sources of funding.

Second, the Umbulan PPP Project is a cross-sectoral partnership project involving six parties (the central government, the local government, the legislative body, the private sector, non-government organizations, and the public) implementing principles of good governance.

Third, there are obstacles in the Umbulan PPP Project, including (a) commitment and coordination of all parties, (b) funding for distribution networks, (c) long processes, and (d) readiness of each party involved. The shortcomings in the implementation include (a)

ineffective regulations, (b) unclear and undetailed main functions and duties, (c) no strict sanctions for commitment violation, (d) long processes, (e) return on investment, (f) monitoring and evaluation, and (g) coordination.

Fourth, there are things to improve in the Umbulan PPP Project. (a) All parties need to understand the mission, functions, duties, rights, obligations as development actors; (b) unified perceptions, openness, commitment from development actors in partnership activities are needed to achieve mutually beneficial results; (c) direct involvement of all parties, especially the regional government, members of the Regional House of Representative, the community, employees, and others are crucial; (d) relevant and correct data must be accessible; (e) there must support to decision-makers at the central, provincial, and regional levels; (f) there must be transparent and consistent requirements criteria for private partners; and (g) there must be clear structure and duties of the negotiation team, and the team must master legal, technical, and financial matters.

Finally, suppose the government only conducts partnerships as a last effort in the distribution of drinking water. In that case, it is necessary to monitor relevant indicators, including (a) total water consumption, (b) trends in groundwater extraction and refilling, (c) other aspects related to quantity, safety measures, and other related quality dimensions, and (d) ensuring a fair service for all people, meaning that the government must regulate access to supply and quality of drinking water services.

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