Abstract

This paper examines a recent change in pricing policies adopted by an Indonesian public water enterprise, and argues that these policies hurt poor customers. The paper argues that this inequitable impact on the poor results from the company’s cost inefficiencies, ineffective regulatory compliance, inappropriate corporate goals and some corrupt relationships with local politicians and bureaucrats. These corporate deficiencies have been effectively hidden by the company’s ability to increase revenue by escalating its prices to customers and paying an increased dividend to its local government owners. The negative impact on the poor, for whom there is no price subsidy, is substantial.

Keywords: public administration, public enterprise, governance, inefficiency and corruption

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Introduction

This paper criticises the current condition of cost inefficiency and price policy in the local public water supply company Bromo Water Supply Enterprise (BWSE), a mid-sized urban area with a population of about one million people in Java, Indonesia. Counter to the national legislation regarding the social goals of a public water supply company, BWSE provides no subsidy scheme for poor customers. The poor have to pay a profitable price for their water so are themselves subsidizing local government’s revenue through its share of the profits paid by the BWSE, including paying for cost inefficiency in the BWSE. A public water company with a monopoly right to deliver water supply should balance its economic aim with its social mission. Policy documents from both the Bromo government and the BWSE officially state that the purpose of the water service delivery is to make a better life for the community in terms of social and economic aspects.

This paper concentrates on concerns of cost inefficiency and price policy in the BWSE case which carry disadvantages for the poor; are against the regulations; and the mission of a public service company. It is argued that by improving these two fundamental conditions will improve BWSE’s financial capacity, especially investment capacity, which can be used to improve other water performance services and to finance human resource programs such as training for employees and an early retirement program.

In funding BWSE’s expenditure, including cost inefficiencies, the BWSE uses general price escalation to increase income generation. This is partly a response to the Bromo government insisting the BWSE management improve the yearly profit share for the Bromo government. The consequent pressure on the BWSE management is indicated by the comment by a member of the Bromo Controlling Agency that there is a common assumption by the members of the Bromo Legislative Assembly that ‘profit reduction is connected with a low leadership performance of the BWSE director. As a result, profit must be increased.’ (personal communication, 1 June 2004).

Data used in this study were derived from reports and interviews. They were cross-checked against each another, for example, interview results were cross-checked against financial data from the company. Data were also analysed comparatively, nationally and internationally, with financial and performance reports from the BWSE compared with those of other water companies.

Inefficiency, Ineffectiveness, Inequality and Governance

Efficiency, effectiveness and equality are common performance criteria. Efficiency measurement calculates cost as input per output (Osborne & Plastrik, 2000). This paper focuses on analysing input cost burdens in the BWSE of activities which are not related to

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2 The Home Affair Minister’s tariff regulation for Indonesian Water Supply Companies (Nr. 2/1998: chapter IV, section 5) states that poor households should be charged under a subsidy scheme tariff.
3 Goals in delivering water supply as stated in the Bromo Mayor’s Decree Nr. 447/2001, the Profile of the BWSE 2003, and the BWSE Corporate Plan 2000-2004 include the consideration of public health concerns.
4 This Control Agency is responsible for advice to the Mayor on valuation of the BWSE performance, but does not have power to take any water decisions.
the production of output units of service: collusive, nepotistic and corruptive practices. Preventing and eliminating these inefficient activities will reduce the cost burden and will improve the company’s financial capacity for other purposes directly related to service performance improvement.

Effectiveness relates to how well outputs achieve the desired outcome of some specified goals (Hatry, 1999, SCRCSSP, 2001), but undesired outcomes are also relevant. A well-performing public program or service is “one that is providing, in the most cost-effective manner, intended results and benefits that continue to be relevant, without causing undue unintended effects” (Mayne & Zapico-Goni, 1997: 5). In relation to effectiveness, this paper analyses only the water price charged to consumers.

The local government and Legislative Assembly ideally act as the equalizer in balancing among various local economic and social goals. However, in this case, they have contributed to the unequal situation in water concerns so the concerns may be considered as a governance problem. The concept of governance is related to interactions among institutions and individuals in the three interconnected areas of the public sector, the private sector, and society (Koliman, 2003) with each sharing accountability and having interconnectedness within a public concern. Problems of cost inefficiency, ineffectiveness and inequality in this water case are considered as a governance problem.

The efficiency or working ratio and cost allocation in the BWSE

Efficiency ratio or working ratio (WR) is a financial performance indicator comparing costs with income which indicates how efficiently a company is managing its resources to generate income; the lower the ratio the higher the efficiency (Petty et al., 1996). The BWSE working ratio tends to the inefficient and according to monthly financial reports worsened during the 2001-3 period. Although BWSE was more efficient than water companies in the United States, Britain, Australia, Africa and other Indonesian companies (World Bank, 2004; BWSE, 2003; BPKP, 2002) is misleading when another comparison is made, especially that of direct and indirect cost allocations.

‘Direct costs’ are allocated as those directly related to the production and distribution of water while ‘indirect costs’ are related to general and administrative activities. During 2001-2003 more than half (53%) of the BWSE budget was spent on indirect costs (Table 1).

Table 1. BWSE Direct and Indirect Expenditure 2001, 2002 and 2003 (in US$)

<table>
<thead>
<tr>
<th>Costs</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>Ave</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Direct Cost</td>
<td>1,527,000</td>
<td>45.7</td>
<td>1,802,625</td>
<td>47.8</td>
</tr>
<tr>
<td>Indirect cost</td>
<td>1,812,000</td>
<td>54.3</td>
<td>1,972,500</td>
<td>52.2</td>
</tr>
<tr>
<td>Total</td>
<td>3,339,000</td>
<td>100</td>
<td>3,775,125</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Calculated from BWSE financial and performance reports 2001, 2002 and 2003

The BWSE’s proportion of indirect costs is much higher than the average of 31% for 184 Indonesian public water companies (Perusahaan Daerah Air Minum [PDAM]-Drinking Water Local Company) and just over double the 24.6% average for the 36
PDAMs sourcing their water from springs, as does BWSE (Badan Pemeriksa Keuangan dan Pembangunan [BPKP]- Development and Financial Controlling Agency, 2002; BWSE, 2002).

**Recruitment system in the BWSE: Implications for costs**

Wages are the largest component of BWSE’s monthly expenditure, leaving relatively little capacity to invest in increasing its service performance. This high wage cost has not been based in the most efficient employment practices. According to a BWSE manager, the recruitment of BWSE employees in the past was mostly through collusion and nepotism (interview, 15 March 2004). Two other staff concurred:

‘The BWSE is a family company. …The current managing director became a BWSE employee when his father was the military commander in this province. The current manager of water distribution is a son of the past general and administration director. His older sister also works here as one of the unit heads in the customer relation division. I became an employee here when my uncle was the Mayor of the Bromo city’ (interview, 18 March 2004).

‘If someone who becomes a BWSE employee does not have family relative connections here, she or he should have a capacity as an entertainer such as a singer and a dancer or as a sports player, especially a soccer player, as the Bromo local government in celebrating and assisting some events asks the BWSE management to provide entertainment services for them and to support the Bromo city soccer team. This is the reason why talented people in the performing arts and sports [as a collusive practice] are recruited in this company’ (interview, 18 March 2004).

The consequence of this previous employee recruitment system is too many employees. Based on the Indonesian Home Affairs Department performance measurement guidelines (IHAD, 1999) the ideal number of employees is 5 for every 1000 connections. The BWSE’s ratio was 7 per 1000 in 2003 (BWSE 2003; PERPAMSI 2002). Further analysis shows that the BWSE employee cost remained the largest component in the total operational cost during 2001-2003 even with a policy of retirements and suspension of new employment for the latter two years (Table 2).

<table>
<thead>
<tr>
<th>Costs</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>Ave</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Employee</td>
<td>1,370,250</td>
<td>41.0</td>
<td>1,466,375</td>
<td>38.8</td>
</tr>
<tr>
<td>Total cost</td>
<td>3,339,000</td>
<td>100</td>
<td>3,775,000</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Calculated from BWSE financial reports 2001, 2002 and 2003

Using the World Bank formula for calculation (excluding costs of depreciation, interest and debt services) the BWSE’s 2003 labour cost was 44.49% of its total operating cost. From the BWSE’s annual reports, most (71.6%) of the employee cost can be allocated to indirect costs (Table 3). This is reflected in the BWSE labour composition, with about
54% of employees (295/546 people) designated as working in the non-technical department, about 32% (174/546) in the technical department number and the other 14% (77/546) across both (BWSE, 2003). The balance of this distribution is opposite to the national average. Across 156 Indonesian PDAM in 2001 only 47% of the total labour force of 24,630 was classified as non-technical with 53% working in the technical departments (PERPAMSI, 2001). It appears that the BWSE places its ‘surplus employees’ in the non-technical department as an indirect cost in its cost structure.

Table 3. Direct and Indirect Cost of BWSE Employees 2001, 2002 and 2003 (in US$)

<table>
<thead>
<tr>
<th>Cost of Employee</th>
<th>2001</th>
<th>%</th>
<th>2002</th>
<th>%</th>
<th>2003</th>
<th>%</th>
<th>Ave</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Cost</td>
<td>374,500</td>
<td>27.3</td>
<td>412,750</td>
<td>28.1</td>
<td>484,625</td>
<td>29.6</td>
<td>28.4</td>
<td></td>
</tr>
<tr>
<td>Indirect Cost</td>
<td>995,750</td>
<td>72.7</td>
<td>1,053,625</td>
<td>71.9</td>
<td>1,154,125</td>
<td>70.4</td>
<td>71.6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,370,250</td>
<td>100</td>
<td>1,466,375</td>
<td>100</td>
<td>1,638,750</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Source: Calculated from BWSE financial reports 2001, 2002 and 2003

In the technical department (direct cost) the BWSE need relatively few workers compared to most Indonesian water companies as its water sources are mainly from springs of good water quality rather than the common Indonesian sourcing from rivers and lakes which need purification and other processing treatments. Also, its distribution is in a relatively compact urban location where its customers are closer than for most Indonesian water companies serving rural customers thus needing longer pipes and more technical employees for installation and maintenance. This is why the BWSE’s direct cost, of water production and distribution, are relatively lower than other PDAMs.

For these purely technical reasons, the BWSE employee/customer ratio should logically be below the national average, perhaps closer to those of the British, American or Australian water companies. The number of BWSE employees, especially in the non-technical department, should be reducible. However, this is not politically easy and would raise strong opposition. According to a senior member of the management:

‘Reducing employees in the current political situation has to be done wisely. The BWSE reduces its employees gradually through pensions and stopping adding new staff. A radical way through firing unproductive employees is a risky way to invite a labour strike. When a demonstration happens, a risk of losing his position will be faced by both the BWSE director and the Mayor as the owner. If the Legislative Assembly is involved in the situation it would become a political game to inquire whether the Mayor and the BWSE director still have the capacity to manage the situation. To cool down the situation would be costly and timely consuming. It can be foreseen how much extra costs would have to be spent by the BWSE to members of the Legislative Assembly’ (interview, 26 March 2004).

In the new era of governmental decentralization in Indonesia local parliaments have more influence over Mayors than was in evidence previously, with the Bromo Legislative Assembly now empowered to elect the (previously centrally-appointed) Bromo Mayor

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5 Based on the National Parliament's Local Autonomy Law Nr. 22/1999.
and to replace him if it twice rejects his fiscal year-end administrative report (Okamoto 2001). A labour strike in the BWSE could be used by the local parliament to attack the Mayor as the owner.

**Political Interference: Implications on costs**

A BWSE water tariff increase in 2003 involved elements of corruption. According to a senior member of the management, one reason for the general increase at this time was:

‘In the last two years the BWSE had not raised its water price. Another reason is that timing to get permission for tariff change was politically effective. At that time, members of the Bromo parliament were giving their attention to supporting their candidate for the Mayor’s position in Bromo city. Politicians wanted some extra money to ensure the success of their candidate. To postpone the tariff climb until 2004 would be riskier because the new parliament election is in the beginning of 2004. So it would be more difficult to obtain approval of a tariff escalation from the parliament when members of parliaments were trying to win sympathy from electors. To get approval from the parliament the BWSE paid off [US$5,000] for each non-high-ranking member of the Bromo parliament. Parliament members who had a higher position in the structure were granted a bit higher than the average. As well, the BWSE has to share some cash with higher rank officers in the Bromo local government (interview, 26 March 2004).

This informant also complained that in the past era of the authoritarian government of President Soeharto the BWSE only paid off a few people in the higher ranks of the bureaucracy to get approval and did not need to deal with all politicians in the parliament (interview, 26 March 2003). This indicates that corruption has tended to increase in the new era of more local autonomy, which means increased cost inefficiency in the public water company.

In the balance sheet this extra cost was allocated to monthly expenditure thus raising the total operational cost in this month. One of the BWSE managers in an interview (15 March 2004) stated that such extra money was usually placed in the indirect costs as ‘other unidentified costs’ (OUC). The total OUC in 2003 was about 2.4 billion Rupiah (Table 4). The total bribery cost for the price rise in 2003 can be roughly predicted to have been about 300 million Rupiah. This figure was an eighth of the total expenditure for the year’s OUC with the remainder of the total still not fully accounted for. As well, the BWSE has to share some cash with higher rank officers in the Bromo local government.

The 2003 OUC was almost 2.7 times the total the BWSE allocated for investment in that year (about 918 million Rupiah, 15% of its total operating profit of 6.1 billion Rupiah). Obviously, minimizing the OUC would significantly save money that could be used to improve the BWSE service performance through increased investment and to compensate retrenched unproductive employees by funding an early retirement program.

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6 On several occasions such as New Year, Idul Fitri day, political campaign, traveling cost, and serving the local government’s guests the BWSE also grants money to politicians, bureaucrats, journalists, political parties, NGOs, community leaders and organizations.
Price policy and subsidy scheme: Implications for the poor

Through the agreed price rise two of the three areas of the local governance system, the private and public sectors, were thus mutually supporting each other in satisfying each others’ immediate needs but the third branch, society or the general public, weakly represented in the local system, can be considered a victim. Water policies related to the public are mostly designed and determined by the BWSE, local government and the Legislative Assembly while the financial and social cost of tariff rises are borne by the public and especially felt by the poor.

Periodic price increases can maintain the sustainability of water companies as well as being one way for some to raise their profitability. Nevertheless, in terms of effectiveness and of equality the setting of price policy should consider implications for the poor. In the case of the BWSE, the newly increased water price of US$0.21 per cubic metre is higher than the average Indonesian PDAM tariff of US$0.14 in 2000. However, the BWSE’s operational cost of US$0.15 per cubic metre sold is less than half the US$0.31 the national average was at that time the BWSE’s water production and distribution costs were generally lower than other PDAMs. For every cubic metre sold the BWSE makes a profit of about US$0.06, when the average of PDAM is minus US$0.17 (BPKP, 2002; BWSE, 2003). So a tariff increase for some PDAM was a concern of sustainability for their existence, while for the BWSE it was a matter of profitability.

According to the BWSE’s 2003 financial data, its total income per cubic metre of the BWSE increased 31.6% over the 6 months after the price rise in 2003 compared to the 6 months before it, by US$5.75 million to US$23.9 million. This additional income is almost the same as the BWSE’s total after-tax profit of US$6.1 million for 2003. The extra money given to politicians and bureaucrats to gain their permission for the most recent tariff revision was not without calculation of its cost-benefit effectiveness. The added income over just the first 6 months after the tariff is about 19 times the estimated 300 million Rupiah costs of the bribery cost.

One of the main issues in discussions of tariff revisions is what is to be the current break event point (BEP) as this is the minimum rate which poor consumers (Consumer Type IIA) are charged. In the current BWSE tariff revision, the BEP tariff was set at US$0.90 per cubic metre water sold. This figure was close to the World Bank’s estimate of US$1.078 for the BWSE’s 2003 BEP tariff (BWSE 2003). The US$0.90 BEP tariff is available for poor households only for the first 15 cubic metres per month used (BWSE, 2003). However, although the BEP tariff is non-profit-making there is no tariff level set below this, meaning that a subsidy scheme for the poor households is not available. This is against the national tariff regulation and social mission of the BWSE.

Table 4. Tariff Water Sold and Water Use by Household Customer Type

<table>
<thead>
<tr>
<th>Household Customer Classification</th>
<th>Average for all household</th>
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</thead>
<tbody>
<tr>
<td>IIA</td>
<td>IIB</td>
</tr>
<tr>
<td>Tariff per cubic metre water sold - US$</td>
<td></td>
</tr>
</tbody>
</table>

7 The breakeven point is that ‘quantity of output where total revenues and total costs are equal. At this point, the firm’s profit is zero’ (Horngren et al., 1996)
8 ‘Customer type IIA, IIB and IIC’, defined as households with the width of streets in front of their house less than 3 meters, between 3 and 6 meters, and 6 and 9 meters respectively.
Moreover, the poor customers actually pay for some of their water consumption at higher, profitable price levels. The average consumption of poor households is 22 cubic metres per month (Table 4). In the BWSE’s progressive tariff scheme, the monthly prices charged to the poorest households for the water they used above 15 cubic metres between 16 and 30 cubic metres per month were US$1.132 per cubic metre, thus over the BEP tariff and considered as a commercial, profitable tariff.

Charging much higher prices to rich categories of household customers will have several benefits. Firstly, the added income from these higher prices can be used partly in cross-subsidizing poor customers. Secondly, the income can be used for capital expenditure to improve service performance in the poor housing location. Thirdly, in response to significant price escalation for them, rich customers can reduce their usage of water to be more efficient so the total bill payment from them remains stable but the water thus saved can be redistributed to poor housing locations currently receiving lower supply services of water quantity, quality and continuity. It means the poor customers can have a better water service performance.

**Conclusion**

A corrupt governance system has contributed to financial inefficiency in the BWSE. The paper argues that cost inefficiency and a general price escalation policy carry disadvantages for the poor customer. It is unjust for the poor, because the tariff calculation is not entirely based on validly justifiable minimum costs. Cost inefficiency was caused by politicians and bureaucrats who decide the tariff policy without consumers being represented in the policy governance process. The public becomes the victim to be burdened by extra costs from past and current mismanagement due to corruption, collusion and nepotism. Rather than following the price regulation to protect the poor customers through a cross-subsidy scheme these customers are paying for cost inefficiency and subsidizing locally generated revenue.

A problem is that water performance arrangements have not been set with members of the public community. Representatives of the community or public have not legally and institutionally been granted legitimate participation or a significant role in the governance process of water performance arrangements. Concealed political intervention from politicians and bureaucrats in the governance process of price policy without the knowledge and direct influence of community representatives can be cost inefficient as well as ineffective and unjust for the public, especially the poor customer.

<table>
<thead>
<tr>
<th></th>
<th>Six months before 2003 price rise</th>
<th>Six months after 2003 price rise</th>
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</thead>
<tbody>
<tr>
<td>customers</td>
<td>0.85</td>
<td>1.009</td>
</tr>
<tr>
<td></td>
<td>1.236</td>
<td>1.910</td>
</tr>
<tr>
<td></td>
<td>1.983</td>
<td>1.136</td>
</tr>
<tr>
<td>Cubic metres of water used per customer</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>26</td>
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<td>34</td>
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<td></td>
<td>26</td>
<td>27</td>
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<td></td>
<td>24</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: BWSE monthly financial reports, 2003-4
The governance system should create a water pricing formula that balances economic and social goals, continually aiming for cost efficiency and effectiveness of the company in delivering social justice for the poor. It will be important to regularly monitor several cost items that may indicate cost inefficiency, especially those classified as indirect costs and unidentified costs, with any savings invested for service improvement programs or for supporting an early retirement program. In price policy, it will be important to exercise a cross-subsidy scheme and monitor the implication of price changes to customers. Coordination and representation with various levels of government and community groups should be maintained including over the regulation and pricing. This system should make its deliberations public, be responsible to the local Assembly, and consist of equal numbers of members representing and elected from the local government, the water supplying company and the water consuming public.

References


