

**Evaluating Outcome Performance in
An Indonesian Public Water Company:
The Implications of Cost Inefficiency
and Price Policy for the Poor**

Drs. Andy Fefta Wijaya, M. Dev. Admin

**(PhD student, Flinders Institute of Public Policy and
Management, Flinders University, Adelaide, Australia)**

**Refereed paper presented to the
Australasian Political Studies Association Conference
University of Adelaide
29 September – 1 October 2004**

Abstract

This paper examines a recent change in pricing policies adopted by an Indonesian public-sector water company (PWSE), 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 PWSE's ability to increase revenue by escalating its prices to consumers 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. The paper proposes the establishment of an independent water regulator to address these issues.

1. Introduction¹

This paper criticises the current condition of cost inefficiency and price policy in the local public water supply company Pasundan² Water Supply Enterprise (PWSE). It identifies several aspects that require consideration in order to improve water supply performance. The PWSE, which is owned by the Pasundan local government, has been granted a monopoly right by that government to supply clean piped water to consumers in the Pasundan area. Findings from this study based on empirical research show that corrupt practices by bureaucrats, politicians and the water company contribute to cost inefficiency in this public company.

In funding its expenditure, including its cost inefficiency, the PWSE uses general price escalation to increase its income generation. This is partly a response to the Pasundan government insisting the PWSE management improve the yearly profit share for the Pasundan government. By local regulation (Nr.11/1974) 55% of PWSE's net profit is distributed to the Pasundan Local Government.³ In 2001, this was 4.18 Billion, about 15 percent of the locally generated revenue.⁴ The consequent pressure on the PWSE management is indicated by the comment by a member of the Pasundan

¹ I thank to my supervisors, Dr Janet McIntyre, Dr Tyffany Morrison, and to Prof Andrew Parkin, John Summers, Dr Roger Wiseman, Ass Prof Carol Tilt, Dr Mike Metcalfe, Helen Dubberley, the APSA Referees, Lincoln Arsyad and M Masud for their valuable contribution.

² Pasundan is a mid-sized urban area with population about 1 millions people in Java.

³ The profit is allocated for investment or general reservation at 15 percent. The rest only gets 10 percent for production, pension and charity, social and education.

⁴ Calculated from the PWSE financial report 2001 and Pasundan Central Bureau of Statistics 2002. The locally generated revenue of the Pasundan local government consists of local tax, local retribution, a share of profitability from local public-owned companies, and other revenues.

Controlling Agency⁵ that there is a common assumption by the members of the Pasundan Legislative Assembly that 'profit reduction is connected with a low leadership performance of the PWSE director. As a result, profit must be increased.' (pers.comm., 1 June 2004).

There is no subsidy scheme for poor customers. They 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 PWSE, including paying for cost inefficiency in the PWSE as explained later.

This is counter to the national legislation about the social goal of a public water supply company.⁶ The PWSE which is a profitable company has capacity to cross-subsidize prices for the poor, one of the common objectives in a public company.⁷ 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 Pasundan government and the PWSE officially commit that the purpose of the water service delivery is to make a better life for the community in terms of social and economic aspects.⁸

This paper concentrates on concerns of cost inefficiency and price policy in the PWSE case which carry disadvantages for the poor and are against the regulation and the mission of a public service company. It is argued that improving these two fundamental conditions will in turn improve the PWSE financial capacity, especially investment capacity, which can then be used to improve other water performance services including water quality, quantity, continuity, pressure, and customer relation; and to finance human resource programs such as more training for retained employees and an early retirement program for retrenched ones.

⁵ This Control Agency under the Pasundan city government is responsible for advice to the Mayor on valuation of the PWSE performance, but this body does not have power to take any water decisions.

⁶ The Home Affairs 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.

⁷ Another way to help the poor water customers would be to allocate the water profit share for development programs in their location.

⁸ Goals in delivering water supply as stated in the Pasundan Mayor's Decree Nr. 447/2001, the Profile of the PWSE 2003, and the PWSE Corporate Plan 2000-2004 include that the PWSE must consider public health concerns.

Data and information used in this study were derived from reports and interviews. They were cross-checked against each another, for example, interview results against financial data from the Company. They were also analyzed comparatively, nationally and internationally, with financial and performance reports from the PWSE compared with those of other water companies.⁹

2. Inefficiency, Ineffectiveness, Inequality and Governance

Efficiency, effectiveness and equality are common performance criteria. Efficiency measurement calculates cost as input per output (Osborne and Plastrik 2000). This paper focuses on analyzing input cost burdens in the PWSE of activities which are not related to 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. So, on the input side, this assists the minimization of cost inefficiency.

In relation to effectiveness, this paper analyses only the water price charged to consumers. Maximizing revenue without considering the social responsibility of the company to avoid negative consequences to the public is ineffective in balancing between the economic and the social. Effectiveness relates to how well output achieves the desired outcome of some specified goal (Hatry 1999, SCRCSSP 2001), but with undesired outcomes 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 and Zapico-Goni 1997: 5).

In this case, desired outcomes for the PWSE from its pricing policy change are profit escalation for the company, and thus revenue for the local

⁹ Comparisons among water companies may not fit perfectly for various reasons including types of operation, human resources, and water sources but they can still be useful to indicate the PWSE's performance position relative to others.

government. Conversely, the poor customer receives undesired outcomes as explained later. This situation appears unjust and is probably illegal, because protection for the poor has been regulated. Goal achievements in economic and social matters should be balanced in a 'horizontal equality' (SCRGSP 2004).

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 (Kooiman 2003: 4)¹⁰ with each sharing accountability and having a connectedness between each other upon a public concern. Problems of cost inefficiency, ineffectiveness and inequality in this water case are considered as potentially responding to a governance solution.

3. The efficiency or working ratio and cost allocation in the PWSE

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 its income; the lower the ratio the higher the efficiency (Petty et al 1996). The PWSE working ratio tends to be inefficient and, as recorded in its monthly financial reports for the period, worsened during 2001-3.

In an international comparison (Table 1) the WR of the PWSE in 2003 based on the World Bank calculation standard¹¹ was the same as to the 1996 WR average of 89 water companies in USA at 0.68, was inefficient in comparison to the 2000 average of 26 water companies in United Kingdom and Wales at 0.61 and an Australian company at 0.39, but was better than the 1996/7 WR average of several African companies at 0.95 and much better than the 2000 average of 186 Indonesian companies at 1.37.

¹⁰ Other authors use the terms 'relations' (Frederickson and Smith 2003: 222) and 'links' (Kettl 2002: 119).

Table 1: Efficiency or Working Ratios of Water Supply Companies in Several Countries¹²

Financial Indicator	Australia ^a	UK& Wales ^b	USA ^c	PWSE ^d	Africa ^e	Indonesia ^f
Working Ratio	0.39	0.61	0.68	0.68	0.95	1.37

Sources: the World Bank 2004, the PWSE 2003, and BPKP 2002 (recomputed)

Notes:

a = 1 company, 1998 data

b = 26 companies, 2000 data

c = 89 companies, 1996 data

d = 2003 data

e = 1 Benin, 2 Nigeria, 1996 data; 7 Burkina Faso, Cote d'Ivoire, Morocco, Namibia, Senegal, South Africa, Togo, 1997 data

f = 186 companies, 2000 data

From this comparison the PWSE seems to be operated far more efficiently than the other Indonesian public water companies but this is shown to be misleading when another comparison is made, 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.¹³ During 2001-2003 more than half (53%) of the PWSE budget was spent on indirect costs (Table 2).

Table 2: PWSE Direct and Indirect Expenditure 2001, 2002 and 2003

Costs	2001		2002		2003		Ave
	Mill. Rupiah	%	Mill. Rupiah	%	Mill. Rupiah	%	
Direct Cost	12,216	45.7	14,421	47.8	16,615	47.7	47.0
Indirect cost	14,496	54.3	15,780	52.2	18,241	52.3	53.0
Total	26,712	100	30,200	100	34,856	100	100

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

The PWSE's proportion of indirect costs is much higher than the average of 31% for 184 Indonesian public water companies (PDAM¹⁴) and just over double the 24.6% average for the 36 PDAM sourcing their water from springs, as does PWSE¹⁵ (BPKP¹⁶, 2002, PWSE, 2002).

¹¹ Excluding costs of depreciation, interest and debt services.

¹² The working ratio for some of the water companies includes costs and incomes for both water supply and sewerage services but for most Indonesian PDAM, including the PWSE, are only for water supply services.

¹³ The direct and indirect cost terminology and allocation is used in the PWSE records.

¹⁴ Perusahaan Daerah Air Minum or Drinking Water Local Company

¹⁵ The quality of the water raw material and the difficulty in accessing it from a river, spring or lake will influence costs of production or direct costs.

¹⁶ Badan Pemeriksa Keuangan dan Pembangunan or Development and Financial Controlling Agency

By and large, as shown by the cost structure of Indonesian PDAM, direct costs dominate the total. However, the PWSE has an opposite trend, with the majority of its costs being indirect. Moreover, after a proportional drop from 2001 to 2002 indirect costs increased relatively again from 2002 to 2003.

4. The unmerited recruitment system in the PWSE: *implications of collusive and nepotistic practices on costs*

Wages are the largest component of PWSE'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 one of the PWSE managers the recruitment of the PWSE employees in the past was mostly through collusion and nepotism (interview, 15 March 2004). Two other staff made other pertinent claims:

'The PWSE is a family company. It is easy to know the history of somebody becoming employees here. The current managing director became a PWSE 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 Pasundan city' (interview, 18 March 2004).

'If someone who becomes a PWSE 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 Pasundan local government in celebrating and assisting some events asks the PWSE management to provide entertainment services for them and to support the Pasundan 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 that the employee numbers are overloaded. Based on the Indonesian Home Affairs Department performance measurement guidelines (IHAD 1999) the ideal number of employees is 5 for every 1000 connections. The PWSE's ratio

was 7 per 1000 in 2003 (Table 3). Nevertheless, this figure is less than the 2000 Indonesian PDAM average of 11 per 1000 and a 1996/1997 sample of African companies with 12 per 1000. However, compared to the averages of United Kingdom and Wales water companies in 2000, American in 1996, and an Australian company in 1998, with 2 or less per 1000 the PWSE employee/connection ratio was at least 3.5 times higher (Table 3).

Table 3: Staff/1000 Connections of Water Companies in Several Countries¹⁷

Staff	UK& Wales	USA	Australia	PWSE	Indonesia	Africa
Staff/1000 connections	1.5	2	2	7	11	12

Sources: Calculated from World Bank 2004, PWSE 2003 and PERPAMSI 2002

Notes: Companies are as in Table 1 except for the PERPAMSI 2002 Indonesian figure which refers to 189 water companies

Further analysis shows that the PWSE employee cost, although annually proportionally decreasing slightly over the period, 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 4).

Table 4: PWSE Employee Cost and Operational Cost 2001, 2002, and 2003

Costs	2001		2002		2003		Ave
	Mill. Rupiah	%	Mill. Rupiah	%	Mill. Rupiah	%	
Employee	10,962	41.0	11,731	38.8	13,110	37.6	39.2
Total cost	26,712	100	30,200	100	34,856	100	100

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

Using the World Bank formula for calculation (excluding costs of depreciation, interest and debt services) the PWSE's 2003 labour cost was 44.49% of its total operating cost. This is double the 1996-1997 average of African water companies, nearly double 1996 American figures and well above that for an Australian company (Table 5).

¹⁷ For this comparison, sewerage staffs of water companies in UK and Wales, USA, Australia, and Africa have been excluded.

Table 5: Ratio between Labor Cost and Operational Cost in Several Countries

Ratio Between	Africa	USA	Australia	PWSE
Labor cost and operating cost	22.34	27.17	32.62	44.49

Sources: Calculated from World Bank 2004, the PWSE 2003

Notes: Companies as in Table 1.

From the PWSE's annual reports, most (71.6%) of the employee cost can be allocated to indirect costs (Table 6). This is reflected in the PWSE 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 (PWSE 2003). The balance of this distribution is opposite to the national average. Across 156 Indonesian PDAM in 2001 only 47% of the total labor force of 24,630 were classified as non-technical with 53% working in the technical departments (PERPAMSI 2001). It appears that the PWSE places its 'surplus employees' in the non-technical department as an indirect cost in its cost structure.

Table 6: Direct and Indirect Cost of PWSE Employees 2001, 2002 and 2003

Cost of Employee	2001		2002		2003		Ave %
	Mill. Rupiah	%	Mill. Rupiah	%	Mill. Rupiah	%	
Direct Cost	2,996	27.3	3,302	28.1	3,877	29.6	28.4
Indirect Cost	7,966	72.7	8,429	71.9	9,233	70.4	71.6
Total	10,962	100	11,731	100	13,110	100	100

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

In the technical department, accounted as the direct cost, the PWSE need relatively few workers compared to most Indonesian water companies as its water sources are mainly springs of good water quality rather than the common Indonesian sourcing from rivers and lakes so needing 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 PWSE's direct cost, of water production and distribution, is relatively

lower than other PDAM. (A further implication of this is the PWSE's profitability is higher than other PDAM as explained in the next section.)

For these purely technical reasons, the PWSE employee/customer ratio should logically be below the national average, perhaps closer to those of the British, American or Australian water companies referred to above. The number of PWSE 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 PWSE 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 labor strike. When a demonstration happens, a risk of losing his position will be faced by both the PWSE 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 PWSE 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 PWSE to members of the Legislative Assembly' (interview, 26 March 2004).

In the new era of governmental decentralization in Indonesia¹⁸ local parliaments have more influence over Mayors than was in evidence previously, with the Pasundan Legislative Assembly now empowered to elect the (previously centrally-appointed)¹⁹ Pasundan Mayor and to replace him if it twice rejects his fiscal year-end administrative report (Okamoto 2001). A labour strike in the PWSE could be used by the local parliament to attack the Mayor as the owner.

The previous recruitment system through nepotism and collusion has created a problem of over-employment for the PWSE with employees having become its single largest cost each year. However, a significant reduction in numbers could invite a labor strike that both the PWSE management and the Mayor would like to avoid. Firing or retrenching employees without their

¹⁸ Based on the National Parliament's Local Autonomy Law Nr. 22/1999.

¹⁹ The Home Affair Minister formerly appointed the Mayor from 3 candidates proposed by the local parliament.

demonstrating may be possible if they are compensated adequately.

Unfortunately, the PWSE does not have the financial capacity for this (interview with the senior member of the management, 26 March 2004).

Management recognizes that the company is overloaded with employees who contribute to cost inefficiency but in the current political and financial system it is safer for both the PWSE management and the Mayor to keep away from a radical approach in reducing its employees.

5. Political Interference from local government and the Legislative

Assembly into the PWSE management: *implications of corruption on costs*

A PWSE 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 that:

'In the last two years the PWSE 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 Pasundan parliament were giving their attention to supporting their candidate for the Mayor's position in Pasundan 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 PWSE paid off 5 million Rupiah for each non-high-ranking member of the Pasundan parliament. Parliament members who had a higher position in the structure were granted a bit higher than the average. As well, the PWSE has to share some cash with higher rank officers in the Pasundan local government (interview, 26 March 2004).

This informant also complained that in the past era of the authoritarian government of Soeharto the PWSE only paid off a few people in the higher rank 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. In other words, a political cost from the new autonomy has been increased cost inefficiency in the public water company.

For the PWSE, the money paid to politicians and bureaucrats in the month before the price rise in 2003 was an extra cost burden so contributed to a lower financial performance of the PWSE. In the balance sheet this extra cost was allocated to monthly expenditure thus raising the total operational cost in this month. It also contributed both to the rise in the WR ratio in that month, indicating lowered financial efficiency²⁰, and to the reduction of the PWSE's profit with that month profitability ratio (ROS) decreasing.

One of the PWSE 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 7). As was mentioned in the interview with the senior member of the management, an ordinary member of the Pasundan local parliament was given 5 million Rupiah with some paid more, plus some bribe money was also paid to several bureaucrats in the Pasundan local government. Therefore, the total bribery cost in June 2003 can be roughly predicted to have been about 300 million Rupiah. This figure was only an eighth of the total expenditure for the year's OUC with the remainder of the total, much of it donations, still not fully accounted for.²¹

In 2003, the total for expenditures classified as OUC was 13.4% of the total indirect cost (Table 7). This was a higher proportion than for 2001 or 2002 and accounted for about 64% of the growth in costs between 2002 and 2003.²² This should be a cost inefficiency signal for the PWSE.

The 2003 OUC was almost 2.7 times the total the PWSE 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 PWSE service

²⁰ As recorded in the PWSE monthly financial reports for 2001-2003, based on the Indonesian Home Affairs Department's performance measurement standard (IHAD 1999) the WR of the month before the price rise in 2003 was 0.2, the lowest figure for the 2001-2003 period.

²¹ On several occasions such as New Year, Idul Fitri day, political campaign, traveling cost, and serving the local government's guests the PWSE also grants money to politicians, bureaucrats, journalists, political parties, NGOs, community leaders and organizations. These findings can not be explained all here.

²² A comparison with the 2001 OUC is not appropriate because Other Identified Costs (OIC) in 2001 were not calculated as in 2002 and 2003 (see Table 7, Note).

performance through increased investment and to compensate retrenched unproductive employees by funding an early retirement program.

Table 7: Other Unidentified Costs (OUC), Other Identified Costs (OIC) and Indirect Costs of the PWSE 2001, 2002 and 2003

Costs	2001		2002		2003		Ave	
	Mill. Rupiah	%	Mill. Rupiah	%	Mill. Rupiah	%	%	
OUC	1,729	11.9	1,493	9.5	2,444	13.4	11.6	
OIC	0	0.0	1,192	7.6	1,156	6.3	4.6	
OUC+OIC	1,729	11.9	2,684	17.0	3,600	19.7	16.2	
Indirect cost	14,496	100	15,780	100	18,241	100	100	

Source: Calculated from PWSE financial reports 2000-2003

Note: OIC in 2001 is not available because this cost was included in OUC. In the 2002 and 2003 financial reports OIC were separated out and presented in four cost categories: research and development; management consultants; transportation; guests and meetings.

As rent seekers in the exchange of their discretionary powers (Robison 1986) the politicians and some bureaucrats were increasing the costs so reducing the efficiency of the PWSE and thus its profit. Nevertheless, politicians in the government and parliament also insist the PWSE increases its yearly share of profit to the government and the policy alternative to increasing efficiency chosen by the PWSE is through general increases in the price charged consumers for water, most recently in the revision of 2003.

6. 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 fairly be considered as a victim. Water policies related to the public are mostly designed and determined by the PWSE, local government and the Legislative Assembly while the financial and social cost of tariff rises are borne by the public, 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 PWSE, the newly increased water price of 21 US cents per cubic metre is higher than the average Indonesian PDAM tariff of 14 US cents in 2000. However, the PWSE's operational cost of 15 US cents per cubic metre sold is less than half the 31 US cents the national average was at that time as the PWSE's water production and distribution costs are generally lower than other PDAM. For every cubic metre sold the PWSE makes a profit of about 6 US cents, when the average of PDAM is minus 17 (Table 8). So a tariff increase for some PDAM is a concern of sustainability for their existence while for the PWSE it is a matter of profitability.

However, other companies outside Indonesia can accumulate higher nominal average profits than the PWSE. In 1998 one Australian water company could get a surplus of 90 US cents per cubic metre sold in 1998 or fifteen times the PWSE's 2003 figure which was also only a thirteenth of the 2000 average of the British water companies and a seventh of 1996 American levels. Ranking companies' relative profitability or rate of profit (profit/cost) shows a similar order but with much lesser differences (Table 8).

Table 8: Average Tariff, Operational Cost/Cubic Metre Sold, Average Profit/Cubic Metre Sold and Profitability among Water Supply Companies in Several Countries

In US\$ ²³	Australia	UK& Wales	USA	Africa	PWSE	Indonesia
Average tariff	1.47	1.8	0.97	0.47	0.21	0.14
Operational cost / m ³ sold	0.57	1.03	0.53	0.4	0.15	0.31
Average profit/ m ³ sold	0.9	0.77	0.44	0.07	0.06	-0.17
Profitability (profit/cost)x100%	158%	75%	83%	18%	40%	-55%

Sources: Calculated from World Bank 2004, PWSE 2003 and BPKP 2002

Notes: Companies as in Table 1 with the exception of Indonesian water companies which use 2000 data from 137 companies (BPKP 2002)

According to the PWSE's 2003 financial data its total income per cubic metre of the PWSE increased 31.6% over the 6 months after the price rise in

²³ The conversion used for Indonesian currency is that on 5 December 2003: 1 US\$ = 8,000 Rupiah (Central Bank of Indonesia, 2004).

2003 compared to the 6 months before it, by 5.75 billion Rupiah to 23.9 Billion Rupiah. This additional income is almost the same as the PWSE's total after-tax profit of 6.1 billion Rupiah for 2003. This significantly added income suggests why the PWSE management prioritizes tariff policy in increasing income.²⁴ 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)²⁵ as this is the minimum rate which poor consumers (Consumer Type IIA²⁶) are charged. In the current PWSE tariff revision, the BEP tariff was set at 900 Rupiah per cubic metre water sold. This figure was close to the World Bank's estimate of 1,078 Rupiah for the PWSE's 2003 BEP tariff (PWSE 2003). The 900 Rupiah BEP tariff is available for poor households only for the first 15 cubic metres per month used (PWSE 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 PWSE as mentioned earlier.

Moreover, the poor customers actually pay for some of their water consumption at higher, profitable price levels. The average consumption of

²⁴ Another income raising possibility for the PWSE would be through further extending its number of customer into its potential market, estimated in December 2003 at about 35 percent of the total local population. However, the PWSE currently has insufficient financial capacity for a big investment in increasing its water production capacity, unless it be financed from debts.

²⁵ 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' (Hornngren et al 1996)

²⁶ '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. 'Customer type IID', defined as households are located primary, twin, protocol, secondary streets, and other particular services with a high economic value with the width of streets in front of their house started from 9 meters up. This IID category also includes households in an elite housing complex and real estates with a high economic value with the width of streets in front of their house started from 6 meters up. 'Customer type IIE', defined as households which run a profitable business activity in their house with the width of streets in front of their house between 3 and 6 meters. This IIE category includes small shops in semi permanent buildings with the width of streets in front of their house started from 6 meters up.

poor households is 22 cubic metres per month (Table 9) and, in the PWSE's progressive tariff scheme, the monthly prices charged the poorest household categories Type IIA for the water they used above 15 cubic metres between 16 and 30 cubic metres per month are 1,132 Rupiah per cubic metre, thus over the BEP tariff and considered as the commercial, profitable tariff.

Table 9: Tariff Water Sold and Water Use by Household Customer Type

Tariff in Rupiah per cubic metre water sold	Household Customer Classification					Ave. for all household customers
	IIA	IIB	IIC	IID	IIE	
Six months before the price rise in 2003	850	1009	1236	1910	1983	1136
Six months after the price rise in 2003	1132	1379	1633	2218	2157	1472
Cubic metres of water used per customer						
Six months before the price rise in 2003	22	23	26	34	26	24
Six months after the price rise in 2003	22	24	26	34	27	25

Source: PWSE monthly financial reports, 2003-4

A cross-subsidy scheme for poor customers can be designed. The household customer type IID, categorized as the rich customer, consumed 34 cubic metres monthly during 2003 (Table 9). In many cases, this customer group consumes water for purposes other than only basic needs of drinking, cooking and bathing, such as for washing vehicles, gardening, and filling an aquarium or pool. The rich customer can assume that the cost does not have a big impact on their monthly expenditure. Despite the price increases the average water consumption of this customer group, which was already about 55% higher than the poorest customer category²⁷, has remained stable over the six month periods before and after the tariff increase. It appears that the rich customers' inefficient attitudes towards water usage will not change unless much higher prices are charged than currently.

Another reason for charging rich customers much higher rates is that they receive a much better service. The rich housing areas are mostly located

²⁷ On average the rich households, as well as having a higher income, consists of fewer family members than the poor households.

in the main streets along which the PWSE's large primary and middle-sized secondary water supply pipes are usually located. Automatically, the rich housing areas are thereby granted a better service performance of water quantity, pressure and continuity as the smaller tertiary pipes connecting directly to customers are close to the PWSE's primary and secondary pipes. Conversely, the connections to poor housing locations from the primary and secondary pipes are mostly indirectly through other tertiary pipes from the rich area so they get a lesser service performance.

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.²⁸

Price rises for rich household customers should not be so high that they cause them to quit from the PWSE water supply and switch to mainly supplying themselves from individual bores.²⁹ The current situation can be maintained if tariffs for direct uses of underground water from bored wells are set at a competitive level with the PWSE tariff. However, the arrangements for exploiting underground water are set up and priced by the provincial, not the local Pasundan, government so coordination among the various governmental levels is important.

²⁸ With increased expenditure the PWSE can reduce the major inefficiencies in its water production and distribution. In 2003 about 30% of the water in the system was declared lost as Unaccounted For Water (UFW). Reducing UFW needs extra expenditure for such as improving the piping system, but PWSE's investment capacity is limited.

²⁹ Large-scale usage by such customers relinquishing the PWSE together with that by those in the population currently without access to the PWSE water supply service would cause uncontrollable water exploitation from local underground resources.

7. Conclusion

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. The establishment of a new independent water body which is free from direct but covert political interference is suggested in this case. 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.

This paper shows some connections between inefficiency, ineffectiveness and inequality. The corrupted governance system has contributed to financial inefficiency in the PWSE which has multiplied its profitability from the latest tariff revision and so increased its profit share to the Pasundan local government. 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 public customers being represented in the policy governance process. The public becomes the victim which is burdened with the extra costs from past and current mismanagement due to corruption, collusion and nepotism. The price policy is ineffective and rather than following the price regulation to protect the poor customers through a cross-subsidy scheme in fact these customers are paying for the cost inefficiency and subsidizing locally generated revenue.

For satisfactory governance it could be more effective to establish a more independent water body which is less subject to direct but covert political interference from local government and Assembly. This water body 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. Particularly, the poor customers should equally be represented in the water body.

The body 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 with various levels of government and community groups should be maintained, including over the regulation and enforcement of the exploitation of underground water.

REFERENCES

- BPKP ('Badan Pengawasan Keuangan dan Pembangunan' or Development and Financial Controlling Agency). 2002. *Profile of Indonesian Public Water Company 2000*, Jakarta: BPKP.
- Central Bank of Indonesia. 2004. *The Conversion Rate for Indonesian Currency*. Jakarta: Central Bank of Indonesia. URL: <<http://www.bi.go.id/bankindonesia2/>>. Consulted 1 June 2004.
- Frederickson, H. G., and K.B. Smith. 2003. *The Public Administration Theory Primer*. Colorado: Westview Press.
- Hatry, H. P. 1999. *Performance Measurement: Getting Results*. Washington: The Urban Institute Press.
- IHAD (Indonesian Home Affairs Department). 1998. *The Ministerial Decree No 2/1998 on the Principles of Water Tariff Regulation for Indonesian Public Water Company*. Jakarta: Indonesian Home Affairs Department
- IHAD (Indonesian Home Affairs Department). 1999. *The Ministerial Decree No 47/1999 on Performance Measurement Guidelines for Indonesian Public Water Company*. Jakarta: Indonesian Home Affairs Department
- Kettl, D. F. 2002. *The Transformation of Governance*, Baltimore: The John Hopkins University Press.
- Kooiman, J. 2003. *Governing as Governance*. London: Sage Publications.
- Mayne, J. and E., Zapico-Goni. 1997. 'Effective Performance Monitoring: A Necessary Condition for Public Sector Reform.' In *Monitoring Performance in the Public Sector*, eds J. Mayne and E. Zapico-Goni, New Brunswick: Transaction.
- Okamoto, M. 2001. 'Decentralization in Indonesia: a Project for National Integration.' In *Government Decentralization Reforms in Developing Countries*, eds Muramatsu, M. JICA (Japan International Cooperation Agency). URL: <<http://www.jica.go.jp/english/publication/>>. Consulted 17 February 2004.
- Osborne, D. and P., Plastrik. 2000. *The Reinventor's Fieldbook*, San Fransisco: Jossey-Bass.
- People Representative Assembly ('Dewan Perwakilan Rakyat'). 1999. *Local Government Act No 22/1999*. Jakarta: Indonesian National Parliament.
- PERPAMSI ('Persatuan Perusahaan Air Minum Seluruh Indonesia' or Indonesian Water Supply Company Association). 2001. *Directory of Indonesian Water Supply Company 2001*, Jakarta: PERPAMSI.
- Petty, J. W., R. Peacock, P. Martin, M. Burrow, A.J. Keown, D.F. Scott, and J.D. Martin. 1996, *Basic Financial Management*, Sydney: Prentice Hall.
- SCRGSP (Steering Committee for the Review of Government Service Provision). 2004. *Report on Government Services 2004*. Canberra: Productivity Commission.
- SCRCSSP (Steering Committee for the Review of Commonwealth/State Service Provision). 2001. *Report on Government Services 2001*. Canberra: Ausinfo.

United Nations. 2003. The World Political Agenda 21. United Nations. URL: <<http://www.un.org/esa/sustdev/documents/agenda21/index.htm>>. Consulted 1 June 2004.

World Bank. 2004. Financial and Performance Data of Water Supply Companies. World Bank. URL: <<http://www.ib-net.org>>. Consulted 21 April 2004