

# State-owned enterprises and the principal-agent problem: a case study of the Solomon Islands Water Authority

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The Solomon Islands Water Authority (SIWA) was established in 1993 to cater for the growing demand for water in the main urban areas of Honiara, Auki, Noro and Lata. Initially, SIWA met its objectives quite effectively, but problems soon emerged, such as an increase in water stoppages and what appears to have been a politicisation of the SIWA Board. This policy paper puts forward the argument that principal-agent problems are inherent in SIWA and appear to be the main inhibitors to good performance. The discussion of the ways to improve SIWA's performance largely deal with the mechanisms that should be put in place to ensure better governance.

The benefits of providing clean water to all appear to outweigh the economic costs as there is a strong positive link between access to clean drinking water, sanitation services, poverty alleviation, sustainable development, and general wellbeing. The provision of safe drinking water and sanitation is a government priority for all nations. In fact, water may be the one area in the environment and development nexus where rich and poor nations perceive themselves as having nearly identical interests, in contrast to such

contentious issues as climate change and biodiversity (Rogers 2002).

The technology for treating and delivering potable water has been successfully applied to water utilities in many developing nations. However, finding the appropriate technology is not the main problem. While water scarcity is an issue in some regions, it is not the primary impediment to improving water quality. In fact, research has shown that water is often a vastly underutilised resource: only three per cent of renewable water in developing economies is withdrawn annually for domestic, agricultural and industrial use. Though environmental factors must be taken into account through policies that promote conservation, there is more than enough water to provide clean water and sanitation to the poor (Rogers 2002). However, despite decades of development assistance, at least one billion people around the world still lack access to safe drinking water. An additional 2.3 billion people do not have access to adequate sanitation (Resende and Tupper 2003).

The problem, as seen by donor agencies and researchers alike, is that developing

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economy governments have direct control of the water sector. In most countries, water is state property; so the state is faced with the decision of how to deploy the resource to the advantage of all the citizenry. Public services or utilities of this nature are very much driven by social imperatives other than market forces. As many have argued, this has resulted in inefficient outcomes (see, for example, Resende and Tupper 2003). There is a consensus amongst researchers that state-owned enterprises often lack the efficiency found in the private sector. The reasons for such differences are debatable but the consequences are not. Generally speaking, it is not difficult to understand how dysfunctional public sector agencies can impair development and perpetuate poverty.

This has also been the case for SIWA. In previous years, SIWA has been on the verge of insolvency, causing serious implications for the wellbeing of the Solomon Islands economy and society. For the sake of maintaining basic services, the government has been doing all it can to address the problems associated with these kinds of entities. As elsewhere, state-owned utilities in the Solomon Islands such as SIWA often lack the efficiency present in private enterprises, leading to lower labour productivity and higher labour costs.

Since the 1999 and 2000 ethnic tensions and the subsequent civil unrest in Honiara and Guadalcanal, SIWA has had to deal with the serious consequences of the closure of the Kongulai pumping station, accounting for about 70 per cent of Honiara's water supply. As a consequence, SIWA's revenue—which was already low—dropped by two-thirds, resulting in large operating losses and postponement of critically important maintenance and investments. The management of SIWA has presented various problems such as

- arrears with SI\$13.65 million at the end of December 2002 while liabilities were around SI\$7.5 million
- SIWA has not provided a reliable financial statement since 1995
- meter readings are often not made and consumption has been estimated, and most likely underestimated for most of the time. Moreover, the majority of the meters have not been working for many years, or were damaged during the ethnic conflict
- from time to time, conflicts with landowners have led to interruptions of the Kongulai water supply
- unaccounted-for water is estimated to be above 60 per cent and needs to be sharply reduced. Water is not monitored in terms of quantity or quality
- operation and maintenance of the water supply and sanitation schemes are not planned.

With financial assistance from the European Union, the Kongulai Water Supply Booster Station was restored in mid 2001. This was the basis of the resurrection of SIWA's operations and for improving its ailing financial and technical health. The donor community has been very committed in its support of the Solomon Islands government in the area of capacity building and energy policy development, with a specific focus on SIWA and its operations. These are important developments that should see the water utility industry in the Solomon Islands become a more dynamic, service-oriented sector that performs reliably and efficiently. However, efforts by the donor community to strengthen SIWA may be undermined by inherent limitations. Although there has been an obvious rise in SIWA's inefficiency, the private sector has been deemed unfit for public service provision, since its main goal is to achieve

profit rather than enhance social wellbeing. In addition, central governments argue that they are in a better position to mobilise funds for investment and service delivery than the private sector.

The government of Solomon Islands and SIWA's management has been very determined to strengthen the authority's financial and technical capacity in order to provide better services. Various independent studies have been conducted into the problems of SIWA. The practices of the Board of Directors have been highlighted as one of the biggest impediments to the growth of the utility. It is claimed that the incompetence of the Board and the poor management practices of SIWA have led to low rates of cost-recovery, low productivity, high-debt burdens, and low service quality and coverage. These inefficiencies have been publicised, causing the government to seek alternative institutional arrangements for the provision of water supplies. Thus, among other policies (such as decentralisation, local management, and communication participation), the policy of privatisation of public utilities has gained strong credibility within government circles and donors alike.

If management is the problem then we should first look at the management structure of SIWA along with the governance mechanisms established to support it. Currently, substantial resources are devoted to the issue of improved economic efficiency but comparatively little inquiry focuses on the management and ownership structure of the utility. This policy paper puts forward the argument that principal-agent problems are inherent in SIWA and appear to be the main inhibitors to better performance. The principal-agent model is discussed to demonstrate its appropriateness as a framework within which SIWA's performance can be examined. The discussion of the ways to improve governance largely deal with the mechanisms that should be put in place to ensure better performance.

## The SIWA Act

### A brief overview of the SIWA Act

SIWA was established in 1992 under an Act of Parliament referred to as SIWA Act 1992. Prior to the creation of SIWA, the provision of water was the responsibility of the water unit in the Ministry of Transport, Works and Utilities (MTWU). One of the main reasons for decentralising water provision was the increasing population in Honiara and other urban centres. The urban drift during the late 1980s caused a strain on the provision of water. While priority was given to the central business district, the growth of surrounding suburbs increased the demand for water. The establishment of the Act was seen by many as a commitment by the government in response to mounting pressure by the public for the provision of safe water. Although established by legislation in 1992, it was not until 2 February 1994 that operations started. Under the legislation, the governance of urban water supply and waste water became the responsibility of SIWA. The main mandate of SIWA is to deliver and levy charges for urban water services and products within its declared area of operations. The operation is to be carried out in a sustainable and environmentally responsible manner consistent with government policies on good governance, transparency and accountability, while observing the cultural and social values of Solomon Islands.

### The structure of SIWA

The structure of SIWA adopted on approval of the Act in 1994 took on a hierarchical model of governance in which lower levels of management are accountable to those above. This structure places the Board of Directors at the top, with responsibility for the strategic direction of SIWA. It also means that management reports to the Board, which makes the final decisions.

### The Board

In the SIWA Act the legislation stipulates that the Minister of the Ministry responsible for SIWA appoints the SIWA Board of Directors. The Board has a total of seven members, including the Chair. Since becoming law, the normal practice has been for the Chair to be a Member of Parliament: the criterion for appointment if not specified in the Act. The Act only specifies the composition of the Board.

As specified by the Act, the SIWA Board of Directors is comprised of the following

- the Chair, appointed by the Minister
- Permanent Secretary of the Department of Mines and Energy (responsible for regulation/administration of water utilities)
- five members appointed by the Minister, of whom two shall be public officers
- the General Manager of the Authority shall be an ex-officio member of the Board.

The Minister has always appointed backbench MPs to the chair. Members of the Board are also, more often than not, supporters of the government of the day; meaning the necessary skills and qualifications needed to perform effectively as a board member become secondary concerns. The membership of the SIWA Board has included agriculturalists, dentists and secondary-school leavers. Management has stated that the lack of expertise reduces the independence of the Board since most technical decisions are left to the General Manager who is only meant to advise the Board as an ex-officio member.

The Act stipulates that the Board shall meet at such times as may be necessary for the transaction of its business. However, the Act states that there shall not be less than four meetings in any calendar year. Such an open-ended clause gives a lot of room for the Chair to decide on the frequency of Board

meetings. The Board members are paid a remuneration package upon confirmation of appointment. There is a remuneration clause in the Act, which states that the Minister responsible for SIWA, in this case the Minister for Mines and Energy, is responsible for determining the allowances paid to the Board members. There are no guidelines for the determination of allowances, another open-ended clause giving a lot of discretion to the Minister.

The remuneration package set by the Minister in 2001 was SI\$350 in sitting allowances for all members of the Board. The Chair received an additional SI\$800 monthly and the others SI\$500. However, the total payments to Board members increased from SI\$68,275 in 2001 to SI\$168,119 in 2003 (Solomon Islands 2004). Although the frequency of Board meetings is not disclosed, one could assume that there was a steady increase in the number of meetings judging by increases in the allocations. From perusal of the Board minutes it is difficult to ascertain whether the payment increase was due to an increase in the frequency of meetings or to an increase in allowances. Whatever the case, the fact remains that there were two substantial increases: in 2002 there was an increase of SI\$64,565 and in 2003 a further increase of SI\$37,269. Given that SIWA was going through a rough time in the period of ethnic tension, it is difficult to see why an increase in allocations to Board members was deemed necessary.

It is of interest to note that during this time there was a reduction in the budget allocation for a management information system (MIS). The deficiencies of the MIS have been highlighted in various independent reports as an urgent matter that has direct implications on SIWA's ability to recoup money owed. The new MIS was to be fully operational and with the necessary training, computer hardware, and prompt and reliable back up services in place before 2005.

### Financial provisions

Under section 39 of the SIWA Act it states that

[t]he Authority shall before the expiration of six months after the end of the financial year, submit to the Minister a report to its activities during the preceding financial year, and the Minister shall lay before Parliament a copy of the annual report.

Additionally, section 40(2) states

[t]he accounts of the Authority shall be audited annually by an auditor appointed by the Authority and approved by the Auditor-General.

The Authority referred to in these sections is the Board of Directors of SIWA.

According to documents cited as of February 2000, the only audited accounts for SIWA relate to the year ended 31 December 1994. Additionally, there are only draft accounts for 1995. For all other years, 1996 to 1999, there are no statements of accounts. Apart from the obvious non-compliance with legislation, the failure to prepare annual accounts has potentially serious financial management implications. The possible reasons for the non-compliance is difficult to ascertain given the conflicting versions of events. According to documents cited, management has blamed the Board for not playing its role in appointing an auditor. The Board, however, has placed the blame on management for not furnishing the necessary documents needed to make an internal audit before the external auditors were to be invited. Whatever the case may be, the obvious lack of compliance is worrying.

### Conflict of interest

A significant problem in the provision of the services by SIWA is the money owed by government (often as high as 25 per cent of total money owned). Moreover, amounts owing do not directly or indirectly appear

in the reports of SIWA. If government charges are not included, then the reports of SIWA do not fully or adequately reflect the cost of providing services, particularly to government. SIWA management has argued that their function commences after the water is acquired. However, it appears essential that the true economic costs of the services provided are identified. The Board minutes make no mention of these issues.

The collection of bills for services provided on credit by SIWA is a major problem for the Authority, and if action is not urgently taken will result in a worsening financial crisis. The turnover of debtors is very low, with collection taking many months on average. Management has stated that the Board has been quick to order disconnection of private entities if they fail to pay their bills. However, the Board is very lenient on state-owned enterprises and government Ministries and Agencies. Often very long repayments schedules are drawn up, with management quick to say are not honoured in most cases.

The current financial state of SIWA means that the government will have to spend large sums of money in the water sector in the coming years. This begs the question of how similarly large sums of money were spent in the past. The government, as well as bilateral and multilateral financing agencies, is looking at ways to improve the governance of SIWA in order to make investments in it more effective and efficient. To choose better water investments we need to have a better appreciation of what is possible with improved governance, along with how best to design institutions for it. None of the issues discussed reveal positive outcomes, but each highlights governance issues that will have to be faced by the Solomon Islands in trying to develop water services as an integrated resource for all users, now and into the future.

## The principal-agent framework

### The principal-agent problem

The theory of principal agency has been used extensively in the field of public administration and political science to examine the problems associated with management and administration. Essentially, the principal-agent approach looks at the interaction of two parties: the principal (ownership) on the one hand and the agent (management) on the other hand (Ricketts 2002). The agency problem arises in that there is always the possibility that management (the agent) will not act in the best interests of the owners (the principals) but may serve their own interests first.

A critical management problem in most organisations is delegation. Delegation occurs when the principal decides that an activity is to be accomplished but cannot easily perform the task themselves. The principal is left with the option of hiring an agent to act on their behalf. Unfortunately, just as principals cannot do the task themselves, they often have difficulty knowing if they have hired the right person for the task and whether the task is being accomplished appropriately. The two problems—hiring the right agent and knowing that they will do the job appropriately—are known respectively as adverse selection and moral hazard (Ricketts 2002).

Moral hazards arise because the principal and agent often have conflicting goals and views of risk; the principal cannot assume the agent will act in the principal's best interest. This conflict is exacerbated by the fact that monitoring the actions of an agent can be costly. Adverse selection problems leave principals in the position of not knowing if they have hired the right person for the job and if the agent is actually doing the task required. One can say that a principal-agent

problem arises when there is a dilemma or conflicting interest between a principal, usually an employer, constituents in an electorate, or a firm, and an agent, usually an employee, politician or a contractor. Often the dilemma arises when the agent has informational advantage and different interests to that of the principal and acts in ways that promotes the agent's interests over the principal's (Koyama 2003).

### Applying principal-agency theory to state-owned enterprises

In the private sector it is relatively easy to identify the principals and agents. These relations become apparent through the specification of the contract between the principal and agent, whether it is written or not. The only major difference between a public enterprise and a private firm in this regard is that the government, or individual politicians, can influence the activities of the enterprise through influence over the management. This stark difference often has a direct bearing on the overall performance of public enterprises. In assessing the principal and agent relationship, Duncan (2005:4) has argued that the government can be appropriately thought of as an agent of society. Duncan states

[t]he principal-agent framework is very useful for thinking about accountability and transparency in the wider public sector context, given that in just about every activity of the public sector—in both its political and bureaucratic dimensions—the public sector is acting as an agent for society as a whole, the principal (Duncan 2005:4).

This is a useful way to address the issue of politicisation of state-owned enterprises. Obviously, society, as the principal, expects efficient and effective state-owned enterprises. To that end the goal cannot be to eliminate the agent so as to reduce

agency problems; the objective should be to minimise the likelihood of that occurring. That means finding the best approach to creating a culture that can attain the most transparent and accountable performance possible. For example, a code of ethics can be adopted that makes it clear to Board members what their roles and responsibilities are. It is also essential that there is sound education of Board members about their obligations as trustees of their 'shareholders' investments.

Another mechanism to reduce agency problems could be the introduction of a whistleblower act. While it is true that there is history of ill-treatment of whistleblowers by the companies they work for, some mechanism must be put in place to ensure that whistleblowers are protected and encouraged to come forward. Therefore, it appears essential to have the umbrella of government legislation, and its enforcement, if this mechanism is to work (Duncan 2005).

## SIWA and principal-agent problem

### The politicisation of SIWA

SIWA appears to be in a state of disarray because of inherent agency problems. In assessing the agency problems of SIWA, an important first step is to look at why the agent, in this case the Board and Management of SIWA, are not acting in the best interest of the principal (society). In Solomon Islands the fluidity of its political party system has to a large extent forced ruling parties to look for innovative ways to retain power. During the late 1990s the government was heavily criticised for increasing the number of government ministries, with many being regarded as unnecessary and wasteful. The government turned to state-owned enterprises to retain power. Political interference has been

highlighted as one of the main obstacles to proactive measures targeting SIWA. One of the difficulties faced by SIWA has been political inference from the highest levels of government. With the Board largely made up of political appointees, its critical role is limited.

### Moral hazards

A classic example of moral hazard is that the appointment of the Chair of SIWA is at the discretion of the Minister, in consultation with Cabinet. This makes it difficult for the Board to make independent decisions pertaining to the overall well-being of SIWA. SIWA does not disconnect government agencies that fail to pay their bills although it is allowed to under the SIWA Act. This poses huge problems since the absence of an independent Chair of the Board has meant that even if disputes are resolved it is difficult to force the government to comply. As a result, problems have often been resolved through informal negotiations. Thus, outcomes are very unpredictable as they depend very much on key individuals in the Board and their relations with the management.

Board members have had little to worry about as there are no mechanisms in place to ensure that as agents, they act in the best interest of the principal. Given that Board members are not appointed on the basis of merit, it is not surprising to see that the Board appears to be in the business of gratifying themselves at the expense of society. One can conclude that it would be in society's best interests to demand the information and statistics needed to ensure better performance. One can also see the role an independent media can play in bringing these issues to the forefront of public scrutiny and debate.

The only way forward appears to be to create 'added' incentives to reduce moral hazards.

## Approaches to reducing agency problems

One can say that most of the agency problems discussed can come under the broad category of lack of transparency and accountability. The fact that there were no financial reports from 1994 to 1999 is testament of these agency problems.

One of the core objectives of any reform exercise for SIWA must be to reduce the extent of agency problems. This means reducing the level of political interference. There is a great difference between political interference and political influence. Political interference often gives rise to distorted outcomes that are, on the whole, not in the best interests of the principal. Political influence is defined, for the purpose of this paper, as the government effectively playing its role as the regulator of the economy. Governments' role as regulator is often ignored when there is an opportunity for political interference that serves the interest of politicians and governments seeking to gain and retain power in Solomon Islands.

To achieve this objective, one of the steps needed is to limit or remove the discretionary powers of the Minister that are currently in the SIWA Act. Such discretionary powers will always give rise to an incompetent Board that will not serve the interest of the society. Whoever is appointed to the Board should be appointed on the basis of merit. The water sector requires people with the necessary expertise to drive strategic programs forward. It is very important that the Board of SIWA is comprised of competent individuals who are knowledgeable of the challenges in the water sector.

The governments' role as the regulator of public utilities also needs to be strengthened. A research-based approach is needed for the government to monitor and regulate public utilities effectively. The reality is that privatisation will be pushed, if not by government then most certainly by the donor community. The problems in SIWA make

privatisation more likely and to some extent the only way forward. Privatisation would only be effective if the government looks at ways to ensure that it is well informed on issues pertaining to the water sector. This ensures that political influence is always present to ensure that these utilities do not lose sight of social objectives that can only be championed by the government in order for it to carry any weight.

Another important area that needs concerted effort is the management of SIWA. SIWA needs to look at ways to revamp its management and appraisal system. For example, it needs what is often referred to as a performance audit.<sup>1</sup> Until now the management team in SIWA has been more committed to the Board and its directives, which are not always in the best interest of the principal. It is high time that the management became more aware of, and more responsive to, its customers. This would ensure that if SIWA is privatised it would by then have adjusted to the mentality/culture that most private sectors preach—customers first. The fact remains that the expectations of today's consumers can only be addressed with success by the private sector. This fact needs to be well understood by the government and with it the necessary paradigm shift in mentality. The role of government in influencing outcomes through legislative frameworks needs to be understood and utilised to its maximum potential. That, in today's global environment, is a role that the government of countries such as the Solomon Islands needs to adjust to and understand well. For SIWA the transition towards a private entity is only a matter of time.

The conversion of government trading departments to state-owned enterprises and their exposure to competition have brought large efficiency gains, as even former critics of these reforms now acknowledge. Although there should always be room for public debate, there is now a large body of evidence that, on average and over time, privately



owned businesses performs more efficiently than state enterprise. The inescapable fact is that private enterprises, monitored by interested owners have stronger incentives to perform than those enterprises merely subject to political oversight (Rogers 2002).

The involvement of the private sector can bring skills and know-how that is not otherwise available to governments. The private sector can mobilise finance for new investments when governments are often preoccupied with trying to raise funds for the large outlays required for infrastructure investments. In the long run the private sector is better placed to manage business risk. Once becoming private, businesses can be set free to develop long-term business strategies, which may include an international dimension.

There is little doubt that private ownership is a significant determinant of economic performance in established market economics (World Bank 2000). In Solomon Islands one can say that opposition to privatisation can now only be based on ideology, not on logic and evidence. There are often only sentimental reasons why people feel privatisation should not be encouraged.

The water sector has far-reaching effects on the economic well-being of the economy. Such important assets should not remain under public ownership. One can say that if we do not rely on public enterprises to produce such essentials as food, shelter or clothing, why allow the water sector to be controlled by a public enterprise. If an asset is important to the local economy or to the company's customers, this only strengthens the case for privatisation. The more important the organisation, the more important it is that it operates with maximum efficiency.

## Note

<sup>1</sup> A professional audit elicits feedback from customers on indicators such as level of satisfaction and so on.

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