

**Public Sector Accounting and Financial Management in a Developing Country
Organisational Context: A Three-Dimensional View**

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Paper revised for presentation at the Apira conference, July 2001

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Abstract

There is a large literature which reports inadequacies in public sector accounting and financial management systems and practices in contemporary developing countries. In this paper we explore the conventional view about the widespread deficiency of public sector accounting and financial management in developing countries. The concept of deficiency is reviewed and then examined through a case study of the Volta River Authority (VRA) in Ghana. We pursue this objective by analysing the empirical evidence in a three-dimensional fashion i.e. from a technical rational perspective, socio-historical perspective and socio-economic development perspective. It is found that although the accounting systems at the VRA are technically sound and well operated, they mask deeper 'deficiencies' which become apparent through an appreciation of the socio-political context in which the VRA operates. Also, they hinder the achievement of the original objective of the VRA, the socio-economic development of the country. This may reflect a general 'deficiency' of accounting systems based on the entity concept.

Introduction

This paper provides an analysis of the nature and effectiveness of accounting and financial management systems within a developing country public sector organisational context. The paper explores a common claim in the literature that public sector accounting and financial management practices of contemporary developing countries are "deficient". An important commonality among the studies suggesting this deficiency, is their representation of accounting as a technical neutral craft at the service of organisations and society. The presumption is problematised in this paper. Technically sound accounting systems may not be neutral and may be a façade obscuring the particular interests that they serve. We need to go beyond the technical and examine the socio-political context in which they operate to fully understand their functioning.

Using the Volta River Authority (VRA) as a case study, the deficiency of accounting and financial management is explored in a three dimensional fashion - from a technical rational perspective, socio-historical perspective, and socio-economic development perspective. In pursuing this objective, the paper demonstrates; (1) how an appreciation of social and historical analysis of accounting can provide insightful understandings of the taken-for-granted process(es) which undergird the received view of public sector accounting and financial management systems in developing countries; (2) how an accounting system which is perceived as effective in the technical rational sense (not only by those whose daily routines are patterned by these systems but also by 'powerful' external institutions such as the World Bank and internationally reputed audit/accounting firms), is severely limited by the historical circumstances of the organisation and; (3) how the current 'inadequacies' of VRA's accounting systems simply reflect major limitations of conventional accounting in general.

The rest of the paper is organised as follows. We begin by providing a brief discussion of the concept of deficiency as it appears in the accounting literature on public sector organisations in the developing world. The need for an elaboration and empirical study of the deficiency claims is then presented. The approach to data collection and analysis using a three-dimensional perspective is explicated. The empirical results are summarised and their implications examined and conclusions drawn. Implications for further accounting research are elaborated.

Concept of deficiency

One of the most important and often controversial issues in the management of the public sector of developing countries is the (in)adequacy of accounting and financial management systems. Many studies point to the deficiency in accounting systems as an important weakness in the management of the public sector of most, and especially developing, countries (Blondal, 1988; Craner and Jones, 1990; Dean 1988; 1989; Ghartey 1985). Whilst monitoring the performance of public sector entities is viewed as a problem in both developed and developing countries (Dean, 1989) "deficiency" in public sector accounting and financial management has been identified as a characteristic of socio-economic underdevelopment (Enthoven, 1988; Craner and Jones, 1990). According to Dean (1989, p.156) "poor countries generally have poor governmental

financial management systems” . In similar vein, Blondal (1988, p.15) maintains that:

In many developing countries inadequate reporting for financial and economic management at the central level has contributed to unrealistic and inconsistent decision making, ineffective monitoring of fiscal developments, and ensuing imbalances in public finance.

One of the major problems relates to the recruitment and retention of qualified accountants. In a study of public sector organisations in eight developing countries, Gujarathi and Dean (1993) found an overall shortage of trained accountants; inadequate training and facilities, and the public sector suffered because of salary differentials between private and public sectors. An important consequence of the lack of qualified accounting personnel is that (p.194):

Questionable, uneconomic, or improper management decisions have been made without proper accounting data and appropriate interpretation thereof.

Most researchers have suggestions for improvement. Enthoven (1988,p.212), for example, writes that:

The great significance of the public sector in many [developing] economies and the deficiencies that exist in public financial management generally require better methodologies, practice and training in this vital sector.

What constitutes “better methodologies” is debatable. Some advocate the transplantation of accounting systems operating in the developed world into the developing countries (Craner and Jones, 1990). Others counter global prescriptions and argue there is little possibility of finding a single monolithic system of public sector accounting that would be effective in all countries, given the significant historical, political and cultural differences among countries (Dean, 1989; Perera, 1989).

Of importance to this paper is the accounting for major development projects. Such projects are undertaken to attempt to break out of the trap of socio-economic underdevelopment, and involve huge investments in terms of financial and human resources. Their management often forms a crucial aspect of the wider national economic policy. So was the case with the Volta River Authority in Ghana, the focus of this paper. The United Nations (1988, p.84) has stated the importance of such projects and the accounting for them :

Development projects are crucial to economic and social progress in developing countries. To achieve their objectives, projects have to be properly managed. For this, the various parties in the management exercise need good financial information and effective system of financial control. Neither is possible without a proper accounting system.

Drawing attention for the need for research in this area, Dean (1989, p.145) stated: “ the field remains neglected in many countries”. It is claimed that often the accounting systems in operation serve only the international donor agencies without accountability to the local population (Ghartey, 1985).

Objectives and approach

There appear to be several levels at which one could assess the ‘deficiency’ or otherwise of accounting and financial management systems at the VRA. At the first level, there is the technical adequacy of the internal and external accounting systems and the personnel who operate them. We intend to investigate the technical proficiency of the systems and compare them to what one would expect in a major state corporation anywhere in the world.

What is different in this research effort is that we go beyond the surface of the technical systems and try to understand the socio-political agreements and negotiations which underpin the technical systems. The reasons for this further enquiry will become clear as the analysis proceeds. Historical reasons for accounting in one way rather than another are investigated and the underlying political agreements which the accounting system support are revealed.

In pursuing our objectives, we present the empirical analysis in three parts/levels. At the first level we draw upon the rich descriptions of the accounting and financial management systems, as presented by organisational actors together with their, and outsiders', perceptions of the effectiveness of these systems. At the second level, we draw upon the theory of organisations as negotiated orders espoused by Strauss, Schatzman, Ehrlich, Bucher, and Sablin, (1963) (1963, 1964) to gain further insights into the systems at the VRA. By drawing upon Strauss et al (1963; 1964) and Strauss (1978) among others¹, we take the view that organisations are social orders whose realities are socially constructed through negotiations. This social constructedness of organisations such as the VRA is not accidental but reflects the interests (both overt and covert) which diverse constituencies in society have in these organisations (Strauss, 1978). Such a view is further upheld because in constructing their realities, organisations recognise the problems involved in combining the important issues of self-interest and the need to live together that are central to both inter and intra-organisational relationships (see Mastenbroek, 1989).

At the VRA negotiations appear to be central to its functioning (see Rahaman and Lawrence, forthcoming)². In such an environment it is our view that accounting researchers should not be restricted to the approach of any one particular theorist such as Habermas, Giddens and Foucault among others to uncover how other social theories can contribute to our effort to represent “accounting as a social and institutional practice” (see Hopwood and Miller, 1994). Against this background, we adapt the work of Strauss and his colleagues as a theoretical lens for making sense of our empirical data at this second level of analysis. This is principally because the negotiated order perspective does not only “address the subject to researchers concerned with negotiation itself... but also to those who work with an eye on the larger issues of organisational and social order” (Strauss, 1978, p. xi). Thus by making sense of accounting and financial management systems and practices through this theoretical position, we seek to broaden the

¹ For apparent reasons to do with space, we are unable to provide a detailed explication of the negotiated order perspective as espoused by Strauss and his colleagues. Readers are encouraged to follow-up these references for the conceptual basis of the theory.

² It will be erroneous to suggest that VRA might be atypical for this reason because, as some argue, “negotiations preside over much of the change which occurs in human society” (Pruitt and Carnevale, 1993, p. xv).

‘critical/interpretive’ accounting project by providing an alternative dimension of how accounting functions in organisations and society (see Hopwood, 1979).

Like the works of other social theories that have had a significant impact on accounting research in recent times (e.g. Giddens’ structuration theory and Habermas’ theory of communicative action), the negotiated order perspective recognises the importance of historical analysis in seeking to understand interactions within social orders. This allows us to represent accounting and financial management systems as techniques that are interwoven in organisational negotiation processes as they change over time and further provide a basis for an evaluation of the deficiency or otherwise of VRA’s systems and practices. We achieve this in the paper by illustrating- historically- with the pricing issue because of its perceived centrality in the reality construction process at the VRA

Finally, the third level presents an evaluation of the financial management systems and practices against the backdrop of socio-economic development, the principal rationale for establishing the VRA. At a third level, the accountability of the VRA project to the people of Ghana is considered. Some commentators claim a deficiency relates to the way in which accounting systems support the interests of donor countries and financial institutions rather than those of local populations. It is important to remember that the principal rationale for establishing the organisation was to promote the socio-economic development of Ghana and its people.

Case study research design

There are divergent views on the use of case studies and various attempts have been made to distinguish case studies from other research designs such as “action research” (Bryman, 1992), “qualitative research” (Bryman, 1992; Yin, 1994), “fieldwork” (Scapens, 1990), and “field-based research” (Spicer, 1992). Despite the divergence in views, there are points of agreement among accounting researchers. Hartley (1994, p.208) captures the essence of case study efforts in accounting:

A detailed investigation often with data collected over a period of time, of one or more organisations, with a view to providing an analysis of the context and process involved in the phenomenon of study.

Case studies can be used in a variety of ways (Ryan, Scapens and Theobald, 1992). This study employs what Ryan et al (1992) refer to as “explanatory case study” of which they say (p.115): “such case studies attempt to explain the reasons for observed accounting practices”. Explanatory case studies focus on the specific case and employ social theory to guide an explanation and understanding. This approach requires a complex interactive process which is followed by the researcher reviewing the variety of available theories which may be relevant to the case. Although this study reviewed the available theories on public sector accounting and financial management in developing countries before embarking on the empirical aspects of the study, it avoided explicit commitment to any theoretical lens until after the evidence was collected. The objective was to ensure that the explanatory case study realised its potential of providing “deeper and richer understandings of accounting within its social context” (Ryan et al, 1992, p. 128)

An Overview of the Volta River Authority

The Volta River Authority is a public corporation established by the Ghana Government in 1961 to generate electricity from the largest human-made lake in the world. Under the Volta River Development Act, the establishing document for the VRA, the organisation is required to supply electricity in bulk to other Ghanaian corporations (including the Electricity Corporation of Ghana, ECG, which until recently was solely responsible for power distribution in Ghana) and power utilities in neighbouring countries. In recent times however, the Authority has also been charged with the responsibility of distributing electricity in the northern half of the country³.

While the establishing document of the VRA requires it to run its “operations on sound commercial lines”, historical circumstances of the organisation have made this objective difficult to achieve and have caused significant problems. Most important in the history of the VRA is the 1962 agreements with the World Bank and Valco⁴ which require the Authority to supply a guaranteed amount of power to Valco at a rate that has been a major source of contention since the mid 1970s. Such an agreement was necessary from the perspective of the Ghana Government because, to secure financial assistance (in the form of concessionary loans) from the World Bank for the Volta River Project⁵, the Ghana Government was required to assure the Bank that not only would there be sufficient demand for power generated from the project but also enough revenue for debt servicing. Since the Ghana Government saw the availability of cheap electricity supply as an important ingredient in the country's desire for rapid industrialisation, it commissioned experts to advise on the possibility of establishing an aluminium smelter as the major consumer of electricity generated from the Volta Project especially during the early years after the completion of the project. Following the recommendation of Western experts, the Ghana Government signed a contract with Kaiser Aluminium and Chemicals Corporation and Reynolds Metal Company (two giant American companies in the aluminium industry) to establish a smelter (Valco) with various concessions⁶ granted by the Ghana Government. In addition, the VRA has relied on the World Bank Group and other international financial institutions for funding of various projects. Each of these financial institutions has certain requirements in terms of what it perceives as strong accounting and financial management procedures necessary to justify loans to the Authority (see Toye, 1991).

These agreements which preceded the establishment of the VRA and subsequent contracts have been major sources of contention in VRA's operations over the years. An important issue that has

³ Such a new role is required because of the current Government's policy that seeks to promote rural/national electrification.

⁴ An aluminium smelter which was established to represent a major consumer of the electricity to be generated from the Volta Project. This is further discussed shortly.

⁵ The initial project for the construction of the Lake was known as the Volta River Project and VRA evolved from this.

⁶ The concessions included a power rate of 2.625/kwh charged to the smelter with no provision for escalation. This rate was later perceived as one of the lowest power cost to a smelter in the non-communist bloc (see Graham, 1982).

not only remained puzzling but also unexplored is how the Authority's accounting and financial management systems have been able to satisfy these diverse constituencies or interest groups. How are the Authority's accounting and financial management systems designed to meet these potentially conflicting objectives of pursuit of socio-economic development on the one hand and satisfying the economic rationalist objectives of international financial institutions on the other? And to what extent do these systems support the current concerns about the widespread deficiency of public sector accounting and financial management practices in developing countries? These two issues are addressed in the case study which follows.

Data Collection

The principal sources of evidence include interviews and document analysis. A total of fifty four people in various roles within VRA and other Government Departments including Electricity Corporation of Ghana and Ghana Public Services Commission were interviewed for this study. Respondents included all Directors and "key staff members" of the various functional areas of VRA. In addition all of the Managers of the sub-functional areas in the Finance Division provided some of the evidence for this paper. Documentary evidence was also gathered including memos, reports from the World Bank and other funding agencies, letters from the Government of Ghana to VRA and its customers, reports from VRA's external auditors, and the Authority's annual reports.

Permission was granted for all interviews to be recorded and later transcribed. Some of the responses were fed back to interviewees to further clarify or substantiate issues which were either unclear to us or were deemed contentious. The evidence collected from interviews were also compared with evidence from documentary sources and where differences occurred, follow up interviews were conducted.

Accounting and Financial Management at the VRA: Technical-rational Dimension

Research on accounting and financial management in developing countries has been dominated by a technical rational view of accounting (see Abdul-Rahaman et al, 1997). A similar perspective was apparent among organisational participants in ordering and interpreting their experience at the VRA. Organisational participants provided rich descriptions and their perceptions of the formal financial control procedures including the planning model, budgetary control procedures, cash management practices, extent of computerisation and issues of decentralisation of the accounting and financial management function. In this section therefore, we explore the deficiency or otherwise of VRA's systems with reference to these technical procedures. It should be pointed out that the evaluation of VRA's systems at this level was not limited to a search for the mere existence of particular control procedures but how these procedures actually applied in practice to facilitate organisational financial resource management. In this paper we discuss the Authority's planning and budgeting procedures as an illustration of the technical effectiveness of its financial resource management systems because a detailed description of all the control procedures which were investigated (and indeed, which partly help in shaping our conclusions at this level of analysis) cannot be provided for lack of space.

The technical rational view of accounting is evidenced by the overwhelming perception among organisational participants that the Volta River Development Act, the establishing document of

the VRA, provides the guiding principles for accounting and financial management in the organisation. The Act clearly addresses various financial management issues ranging from revenue recognition, asset revaluation and depreciation, to borrowing from international financial institutions and treatment of associated interest (see Section 21-26). A senior member of the Finance Department observed:

Our financial management is carefully done... we have statutory provisions which form the bedrock of our financial management procedures in the Authority and any effort to understand our systems should start from there.

To ensure compliance with these statutory provisions, they are reproduced in the Finance and Accounting Manual (1996) that details the procedures for financial management at the operational level.

Organisational participants observed that since the accounting and financial management systems form the basis for the preparation of periodic financial statements and other financial information required for control of the Authority's operations, management always take appropriate measures to ensure the existence of "an adequate accounting system". Accordingly, the Authority's Internal Audit Manual (1991, p. 120) provides details of what VRA considers an effective or adequate accounting system when it states:

An effective accounting system should:

- a. ensure that all valid and only valid transactions are identified and recorded on a timely basis;
- b. ensure that details of transactions recorded are accurate;
- c. record the transactions at the right value in the proper accounting period;
- d. describe the transaction in sufficient detail to facilitate its proper and related disclosure in the financial statements; and
- e. limit the opportunity for fraud and other irregularities.

The above criteria was argued to guide the perceptions of both organisational actors and external constituencies such as the World Bank and other international financial institutions when evaluating VRA's systems of financial resource management. One of the financial control procedures which was overwhelmingly perceived as most important and central to the Authority's overall financial management⁷ was the "integrated planning and budgeting model" (see also Horngren et al, 1994 for a textbook view on how an effective planning and budgeting system is constituted). A discussion of this model as implemented at VRA is provided here as an illustration of the nature and effectiveness of VRA's systems.

The model begins with the preparation of Departmental Statement of Objectives, which derive from the overall Corporate Statement of Objectives. Organisational participants noted that by clearly defining objectives each Department within the VRA is able to prepare both operational and long-term plans with assistance from the Planning and Programming Department (PPD). Departmental objectives are set with reference to the PPD's instructions on:

⁷ Some respondents argued that these procedures were central to the entire management process at the VRA.

- i) economic assumptions of the plan
- ii) format of the plans to be prepared
- iii) timetable for the planning process
- iv) details of persons accountable for production and approval of plans
- v) the length of the plan period and review intervals (Accounting and Finance Manual, 1996, p. E 3).

The next stage of the planning model involves “business assessment” covering a review of current and potential market share, market opportunities, legislative environment, international implications and possible threats to the Authority’s operations. A clear assessment of the above issues enables the Authority to determine alternative strategies for achieving its objectives and the choice and justification of a preferred strategic direction for the entire organisation. The final stage in the Authority’s planning process involves financial evaluation providing sufficient detail for the identification of the different economic and operational areas defined in the business assessment. The financial evaluation process culminates into a profit and loss account, balance sheet and cash flow projections for the plan period.

Another important dimension of the model is the annual budgeting process. The various departments of the VRA usually prepare annual budgets that reflect the Authority’s operational and long-term plans. Annually, corporate instructions are sent out to the various Departments stating the expected content and format of departmental budget submissions, timetable for budgets, the general assumptions for the budget period and economic indicators such as general inflation and currency exchange movements. A pre-budget review is then carried out to outline the direction of the “budget in macro terms, and quantify recurrent expenditure, investment proposals and staffing levels to enable targets to be agreed with management at an early stage in the budgeting process” (Finance and Accounting Manual, 1996, p.E6). This further allows each Department to formulate its recurrent budget for the coming period. At this stage, the management accounting division then “collates” the Departmental recurrent budgets to prepare a consolidated Recurrent Budget and a Consolidated Capital Budget for the Authority (Finance and Accounting Manual, 1996). These budgets then become an important tool in the management process at the VRA after the review and approval of the Chief Executive.

Organisational participants expressed very positive perceptions about the effectiveness of the model as described above. Most important positive perception of the budgeting systems centred on the fact that all organisational actors are encouraged to participate in setting budgets and targets. In addition, there is a common belief among organisational members that a detailed or rigorous planning and budgeting model is required not only because of the size of the VRA but also the need to meet the stringent requirements of international funding agencies such as the World Bank. The Authority has always been able to maintain such a model, organisational actors argued, because of the “existence of competent workforce”⁸. Clearly, such an argument runs counter to the view (central to the deficiency claim) about the widespread lack of qualified or competent staff in third world public sector organisations (see Gujarathi and Dean, 1993).

Furthermore, the views supporting the deficiency theory offered by Caiden and Wildavsky (1974)

⁸ This claim about the existence of a competent workforce at the Authority was supported by a staff member interviewed at an independent government agency that is involved in VRA’s supervision.

and subsequently Alam and Lawrence (1994) about the high degree of environmental uncertainty (engendered by formal political processes and the institutional setting within which public sector organisations function) impacting on budgeting in third world public sector organisations were unsupported in the context of the VRA. In response to this issue, organisational actors identified uncertainties that were production related as argued in the following quote:

...there are [bound to be] uncertainties in any budgeting process as I already indicated, but the careful planning we undertake and the extent of our autonomy makes VRA different... We do have uncertainties impacting on our budgeting process but these have never been political... The [Ghana] government is very much aware that the VRA is carefully watched by international organisations which have huge investments in the Authority, so it has a limit to which it can interfere in our operations... it [the government] does interfere but not in terms of budgets. Budgets are our internal management tools (senior staff member, interview).

Instead a major uncertainty identified as having a strong impact on the Authority's budgeting process is the weather. Organisational actors observed that sometimes the budgets are thrown out of gear because of unforeseen weather conditions. Indeed, vagaries of the weather are perceived as a threat to the entire operations of the Authority since it depends solely on the Volta River for power generation.

There was also an overwhelming positive perception not only among organisational actors but other external constituencies about the effectiveness of the Authority's systems of financial resource management. In particular, the World Bank that has closely followed developments at the Authority since its establishment (see Killick, 1978; Toye, 1991) observes in a review of VRA's systems that:

VRA's accounting and budgeting systems are generally satisfactory and provide timely and reliable financial information. It has an independent internal auditing department which forms part of its system of internal control... Improved financial systems and reporting are expected following the full computerisation of VRA's accounts, and other improvements are expected as a result of the full integration of financial management... Each year its fixed assets are revalued, using a satisfactory indexation formula... Present auditing arrangements are satisfactory. VRA's accounts and auditors' reports are submitted within six month period agreed with IDA under the ongoing Northern Grid Project. VRA's auditors (Coopers and Lybrand, Accra) have never had occasion to qualify VRA's accounts (World Bank Official Report No. 8207-GH, 1990, p. 11).

The above together with the descriptions of the formal financial control procedures illustrated in this section suggests that the claims of deficiency in accounting systems in the accounting literature could not be supported in the case of the VRA. Not only were the systems technically well designed, they were operated by extremely well qualified accounting staff.

The analysis might have ended here. However, we believe it is important to understand how the technical accounting systems became to be what they are. It is important to problematise the purely technical view of the Authority's financial resource management systems to gain an appreciation of how the systems arise and how they are maintained and changed over time. We

attempt this in the next section (i.e. at the second level of analysis) by drawing upon the theory of organisations as “negotiated orders” to facilitate a broader understanding of the technical systems as outlined above. The choice of this theory was significantly informed by the dominance of “negotiations” as a theme in the empirical evidence gathered at the VRA. Indeed, organisational participants noted that negotiation permeate every aspect of the Authority’s management process because it remains central to what is perceived as the Authority’s most important and contentious financial management issue – pricing of its product.

Behind the Technical façade: Socio-historical Dimension

In this section, we argue that the accounting and financial management systems which were overwhelmingly perceived by both internal and external constituencies as technically effective constitute a façade which seeks to mask and legitimise outcomes of prior negotiations some of which defy explanations grounded in conventional financial management and accounting.

As indicated in the introduction of the VRA, the establishment of the organisation was preceded by a number of agreements⁹ resulting from negotiations between the Government of Ghana (acting on behalf of the Authority) and other international organisations. Most important of these agreements was the contract signed between VRA and Valco (an aluminium smelter) requiring VRA to supply a minimum¹⁰ amount of power to Valco at a rate, set in 1962 at 2.625 mills/kWh, without any escalation for a period of thirty years in the first place subject to a further twenty-year period if Valco chose to exercise this option. Various commentators have expressed their views about the power rate agreement. For example, Sir Robert Jackson in a foreword to Moxon (1969) notes that “the agreement represents the best thinking that could be brought to bear on the project... the Government of Ghana was advised by experts of high repute”. These experts have been interpreted by Sims and Casely-Hayford (1986, p. 19) to include “the World Bank and one of the large international accounting firms”. Graham (1982), however, takes a more critical stance arguing that the agreements taken as a whole were tantamount to neo-colonialism because they were inconsistent with Ghana’s socio-economic development policies at the time. We agree with Graham and further argue that these agreements present major constraints for effective or conventional financial management practices at the Authority.

Organisational participants maintained that pricing of VRA’s product remains the most contentious in its financial management partly because of the constraints posed by the rate agreement with Valco against significant changes (subsequent to the agreement) in local and global trends with major implications for the energy sector in general. The legal nature of the agreement implies that VRA can never unilaterally change the power rate as agreed in the 1962 Contract. With the global oil crisis in the 1970s, Valco became one of the smelters with the lowest power cost in the non-communist bloc. In addition to the global changes in power rates, local inflation in the first decade after the agreement resulted in a significant increase in cost of electricity production in Ghana thus engendering serious financial crisis at the VRA. With such changes, conventional managerial accounting wisdom (grounded in neo-classical economic theory) suggests that an organisation supposedly “operating on sound commercial lines” (i.e. VRA) should respond by adjusting its pricing structure in tandem with the rising cost of

⁹ See Moxon (1969), Graham (1982) and Sims and Casely-Hayford, (1986) for a full list of these agreements.

¹⁰ Representing over 60% of total electricity generated by VRA in some years.

production if it is to survive. However, in the case of the VRA, this conventional managerial accounting logic heralded in most textbooks could not be applied because of the constraints posed by the prior agreements with Valco. This is a clear case of accounting and financial management logic being constrained by socio-historical or legal commitments. On this issue a senior staff member remarked:

... until the 1962 agreements are significantly changed, I don't think rational accounting and financial management principles can be applied to our pricing structure... The only possible option in seeking to change the provisions of the contract is through negotiations...

Thus with the significant global and local changes (subsequent to the 1962 agreements) the VRA invited Valco for a re-negotiation of the power rate in the early 1970s. While this resulted in adjustment of the power rate, the management of VRA found that this was not sufficient when more 'serious' changes in cost of production occurred in the late 1970s to early 1980s. Further renegotiations of the power rate were required and Valco showed some reluctance to adjust the rate. At this time, a military junta that had seized political power intervened and decided to take up negotiations with Valco. After five rounds of intensive negotiations – which sought to bring Valco's power rate in line with similar smelters all over the world – spanning the period 1982-1984 the Valco rate agreement was adjusted in accordance with a formula which now allows for escalation. Thus pricing to Valco is now given by:

$$\text{Power Rate} + \{17 - ([2760 - x]/275)\}1/3 + \{17 - ([2760 - x]/275)\}2/3 * y/73.$$

Where:

X= the Gigawatt-hour supplied to Valco in the year

Y= the preceding six month average London Metal Exchange (LME) price in US cents/lb

2760= sufficient power for Valco to run four potlines (i.e. the negotiated guaranteed power of 315 Megawatts)

275 an agreed constant for indexing the variation in power supply to Valco

73= base price of metal on LME at the time of agreement

While the negotiations in the early 1980s resulted in what is perceived as an improvement in the agreement with Valco (see for example, Sims and Casely-Hayford, 1986), it is important to note that this rate determination structure does not bear any relations with conventional accounting and financial management wisdom. For example the current overhead allocation system which is expected to have a strong influence on the Authority's rate structure (see Lal, 1982) is perceived as a posterior rationalising exercise which is irrelevant for pricing purposes. Thus organisational participants overwhelmingly supported the Authority's plans to change from the current overhead allocation system to Activity Based Costing (ABC) system. This, they argued would provide an ingredient for future negotiations with Valco because of ABC's ability to provide more accurate cost analysis.

Other accounting issues such as financial reporting practices were perceived as instruments for shifting the balance of power in negotiations with numerous international financial institutions that lend to the Authority. For example, the Authority's current policy of revaluing its fixed

assets on a five-yearly interval, is a requirement of the World Bank to ensure that the agreed return rate of 8% on fixed assets (necessary to justify further concessionary borrowing from the Bank) is not based on historical cost in a very high inflation rate country. Some commentators see the influence of these international financial institutions as a major contributing factor to the perceived effectiveness of the Authority's financial management systems. Killick (1978, p. 51), for example, notes that:

... in order to secure the participation of the World Bank without which it may not have been possible to get the project underway at that times, the Nkrumah government found itself required to comply with the conditions designed by the Bank to ensure that the project would be operated to its satisfaction. Thus... an accounting firm acceptable to the Bank was to advise on the Authority's financial records... In an additional agreement in 1969, the Authority agreed to review its operations, organisational structure, staffing policies and accounting systems in a manner acceptable to the Bank. Of course agreements can be broken... they were not in this case.

The above quote quite clearly illustrates the paternalistic relations between the Authority and its major financier especially in terms of financial management and accounting systems required for monitoring its resources. Organisational participants also indicated that accounting and financial management systems and policies were also central to negotiations with other international financial institutions such as the IMF, Kuwaiti Fund, Saudi Fund etc. While these financial institutions have common conditions in terms of the level of effectiveness of financial management systems required for loan approvals¹¹, there have been occasions where these requirements conflicted and had to be "negotiated" to obtain a balance bridging these 'divergent' conditions. In this process the interest of the Ghanaian public, as a constituency, is often sacrificed. Clearly, this supports the view (see Abdul-Rahaman et al, 1997) that there is a need for an investigation into why third world citizenry are not accorded any importance in accountability relationships in the government sector. Although a high illiteracy rate and lack of interest on the part of the Ghanaian public were cited (by organisational participants) as some of the reasons for this apparent neglect, the response of the Ghanaian public to recent policies of the Authority suggests that this regime of quiteism is nearing its end.

While with reference to the technical procedures for accounting and financial management, it was suggested that the deficiency claim might be rejected, the exposition in this section leads us to caution that there may be deficiency in another sense. This is because what is perceived as the most important financial management issue at VRA – pricing of its product – defies conventional accounting and financial management explanations. We argue that in its efforts to legitimise and protect the outcomes of prior negotiations (and to shift the balance of power in future negotiations), some of the Authority's systems (e.g. overhead allocation) do not only defy conventional accounting wisdom but also contradict the systems of an organisation which is supposedly running its "operations on sound commercial lines". Clearly, by lifting the veil to uncover the particular ordering processes which remain buried underneath the technical façade, we caution that the deficiency claim should not be naively rejected on the basis of apparently sound technical procedures. In the next section we provide the third level of assessing the

¹¹ It is important to note the apparent neglect or reluctance of the international financial institutions to challenge the 1962 agreements, given the constraints that they pose in the Authority's financial management process.

Authority's systems; an assessment which takes into consideration, the principal rationale for establishing the organisation (i.e. socio-economic development of Ghana).

Behind the Technical façade: Socio-economic Development Dimension

The discussion of the empirical evidence in the two preceding sections resulted in two conclusions on the deficiency claim. While from a technical rational perspective the deficiency claim may be rejected, we can, by going behind the technical procedures, uncover how the systems arise and how they are maintained and changed over time, and how they meet organisational objectives. In this section the accounting and financial management systems and practices are examined against the backdrop of the Authority's principal rationale, the socio-economic development of Ghana.

The VRA project involved the construction of the largest man-made lake in the world. The project involved the displacement of many villages and severe environmental effects. The aim was nevertheless to improve the socio-economic development of Ghana and to improve the lot of its people. Questions need to be asked. We assess the extent to which the Authority's systems encouraged sustainable development, and economic progress of the local population. Locals have been vociferous in complaints about high electricity prices. It was established that while the VRA is a major contributor to the government's policy of rural/national electrification which seeks to provide electricity to all parts of the country by the year 2020, rates charged to domestic consumers are perceived as unaffordable. To put these rates in perspective, the appendix shows the various classes of customers and the rate charged to them per kilowatt-hour from 1966 to 1983. It shows that local electricity consumers pay about five times the rate charged to Valco under the 1962 agreements as amended over time. A survey of the Ghanaian public indicated that this high domestic power rate would deter most rural Ghanaians especially in the districts from connecting onto the national grid if significant changes were not made to the current rate structure. Indeed, the current domestic power rate structure is inconsistent with the government's campaign to provide cheap power for all by the year 2020 and has resulted in nationwide protests in recent times. Two modes of dealing with the situation include government subsidies for rural electricity and cross subsidisation between rural and urban electricity consumers; the former being the mode that proved very effective during the drive to Western socio-economic development.

It should be mentioned, however, that the rate structure is largely influenced by the institutional setting within which VRA operates. As noted earlier, the Authority is required to operate on sound commercial footing while the rural/national electrification can only be justified on social grounds. This leaves the Authority in a conflict situation where the government makes promises of connecting electricity to all parts of the country while the Authority is required to charge commercial rates; rates which are perceived as unaffordable. We therefore conclude that in terms of "people-centredness" there may be some support for the deficiency claim if we took into account this aspect of the principal rationale for the establishment of VRA.

Like most hydroelectric authorities, the VRA has some environmental obligations that are a direct result to the establishment of the dam. This includes the resettlement of the people who were displaced as a result of the construction of the dam and ensuring their wellbeing. In the past

the VRA has always reported progress in terms of the extent to which its environmental obligations have been addressed in its annual reports. While significant efforts have made in terms of meeting the Authority's obligations, there are still problems of integrating these issues with the current financial management system. This is because of the high level of expertise that is required to quantify or design costing principles for assessing and measuring the Authority's environmental obligations. Such a problem is not peculiar to the VRA but exists in most developed countries and thus suggests a major limitation of conventional accounting (see Ali, 1994; Hooks, 1996; Frost and Wilmshurst, 1996). We therefore argue that the inadequacies in terms of VRA's inability to design environmental costing principles while suggesting some form of deficiency, are general limitations of conventional accounting; limitations arising from the over-emphasis on the entity concept.

Summary and Conclusion

The accounting literature suggests that a problem in developing countries is that of poor accounting systems in their public sector organizations. An absence of appropriately qualified staff and poorly designed accounting systems leads to unreliable financial information to make sensible economic decisions and to ensure resources are properly applied in the interests of economic development.

The empirical evidence in our study shows that in the case of the VRA there was no doubting the technical proficiency of the accounting staff and financial reports were generally considered to be of international standard. The presumption that technically sound accounting systems inevitably produce sound economic decisions and assist in meeting development goals is however problematised. The evidence suggests that the accounting systems in part protected interests of outside parties at the expense of the local population. One has to go beyond the examination of technical matters, and understand the socio-historic context, to understand why this was the case.

The discussion of VRA's systems of financial resource management provides insightful views and concerns about the simplistic deficiency claim in third world public sector accounting and financial management literature. Since the deficiency claim could not be strongly upheld in the technical rational sense, which currently dominates the literature, we suggest that researchers should endeavour to employ "critical" and "interpretive" perspectives to aid an understanding of this huge area of research. There is much still to be learnt from accounting research in this area because:

We do not, as matter of course and in the daily run of our lives, have access to the viewpoints of the less powerful in our society. In so far as we are aware of such groupings, it is often through derogatory accounts provided by powerful groups (Cuff and Payne, 1979, p. 100).

Indeed, there is an urgent need for local critique of public sector accounting and financial management research in this under-explored field. This is extremely important in light of the current reforms sweeping through the public sector of most developing countries. Without policy-based empirical research into this area, well-intentioned experts might offer wrong or ineffectual prescriptions for third world public sector financial management. Perhaps advice such as Dean's

(1989, p. 145) suggestion (below) amounts to an overreaction to the situation in the developing world.

Pumping development finance into countries with weak accounting and widespread lack of skills through agencies with defective systems has predictable consequences: Basic assurances concerning proper use of funds is missing.

Clearly, Dean is cautioning international financial institutions (such as the World Bank and IMF) and other donor nations about the dangers involved in supporting third world development projects if their governmental accounting systems continue to be represented in the academic literature as “inadequate” (Blondal, 1988), “deficient” (Dean, 1989) or “old-fashioned” (Craner and Jones, 1990). These international financial institutions have a strong role to play in improving the situation especially through sponsoring research into governmental accounting and financial management in these countries, given that most third world accounting academics (who have a wealth of knowledge of the local conditions) have very limited budgets/grants vis-a-vis the relatively high cost of conducting research in these countries.

This paper has pioneered a discussion in a potentially huge area of accounting research and debate. We have sought to illuminate one of the most taken-for-granted issues in contemporary third world accounting literature - the overwhelming concern about the widespread deficiency in third world public sector accounting and financial management practices. It was observed that the concerns about the lack of formal control and budgetary procedures, lack of auditor independence, gross embezzlements and misappropriation of funds, lack of competent staff, untimely and inaccurate financial information, and lack of published annual accounts did not hold in the context of the VRA. However, the historical circumstances of the Authority present serious constraints and challenges to the effectiveness of its financial resource management thus rendering the accounting and financial management procedures, a facade which masks the underlying socio-political reality in the organisation and therefore could fit the description as “deficient”. This, we argue, is partly a reflection of the institutional setting within which VRA operates and to some extent a limitation of conventional accounting. Indeed, it is a limitation arising from accounting’s over-emphasis on the entity concept.

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Average Power Price per KWH of Energy Sold per Customer 1966-1983. Source: Sims and Casely-Hayford (1985, p. 24)

Years	E. C. G.	The Mines	Akosombo Textiles	Akosombo Township	Valco	C. E. B.
	Average Price Cedi/kwh					
1966	.007055	.006769	-	.022889	.002101	-
1967	.007350	.006519	-	.007540	.002502	-
1968	.007367	.006859	.017650	.007882	.002679	-
1969	.007623	.006970	.017079	.006632	.002679	-
1970	.008044	.007105	.008776	.007306	.002678	-
1971	.007981	.007448	.007567	.007356	.002732	-
1972	.008070	.007601	.008326	.009250	.003394	.011774
1973	.008064	.007675	.008377	.009244	.003194	.009584
1974	.007515	.008219	.009954	.009197	.003162	.009391
1975	.008111	.008806	.008845	.009209	.003196	.009131
1976	.009762	.010617	.011767	.009197	.005175	.009927
1977	.012882	.013812	.014976	.030281	.004974	.011234
1978	.016824	.0204072	.020950	.015982	.008300	.024504

1979	.022228	.034823	.042888	.026668	.012827	.040992
1980	.044068	.065827	.091138	.047918	.013191	.039595
1981	.076708	.089457	.127487	.075097	.015886	.039479
1982	.079217	.092006	.271406	.077107	.013750	.058664
1983	.095709	.100443	.290725	.093101	.017855	.226430

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