



Internal control and management guidance of power industry in Ghana? Revenue mobilisation perspectives

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Abstract

The current problem in the power industry in Ghana is worrying to every citizen of Ghana and brings into mind whether there is no effective control system to properly manage the services. The main motive for this research was to examine the impact of internal controls on revenue mobilisation at the power industry of Ghana. The selection of power industry is due to the fact that even though it is the sole and main power distributing company in Ghana, it has encountered a lot of financial problems in the recent times leading to poor provision of services, especially what is called 'Dumsor' in Ghanaian Language or unannounced power outage. The population for the study is the whole workers in the power industry in Ghana. The study used a purposive sampling technique to select the Kumasi main office which has 50 key employees as the sample for the study. A well-tailored questionnaire was used to gather primary data from the respondents. Descriptive statistics, reliability statistics and test of significant-(t-statistics) were performed through IBM SPSS to come out with the findings. The findings indicate that all the variables assessed were statistically significant, a Cronbach's alpha of 0.943 indicated that there is an excellent and equally effective avenue as internal control measures which the power industry can rely on. It is recommended that management, policy makers and future researchers should develop clear policy, new theories and models on how to regulate the industry to the benefit of all Ghanaians and the neighbouring Africa countries.

Keywords: Revenue mobilisation, internal control, management guidance, theories, dumsor.

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1. Introduction

Internal controls thus refer to the measures meted out in institutions that ensure that the firm's objectives, goals and missions are attained. They are also set of rules, policy and procedures that ensure that a certain pattern is followed by all staff so as to ensure a constant quality and likeness. According to Hayes, Wallage and Gortemaker (2005), organisations establish internal controls to enable them to achieve performance and organisational goals, reduce wastage in resources, ensure compliance while enabling reliable reports through an enabled production. Owusu (2012) insists that if firms want to reduce physical wastage and corruption in the application of funds, then it needs to strengthen its internal control measures.

Internal control is also explained to mean as the entire system of control, financial or otherwise established by the management in order to carry on business of the enterprise in an orderly and efficient manner while ensuring strict adherence to management decisions and policies as well as safeguarding the assets of the firm. Igweneagu (2011) posits that the individual component of an internal control system is known as controls or internal control and thus consists of all the measures taken by the management of the organisation to protect its resources against wastage, fraud, inefficiencies while ensuring reliability in accounting and operating data. The impact of an effective internal control in the management of a firm ensures growth, survival and safeguarding of assets while ensuring the completeness and accuracy of records. Aguolu (2004) on his part described the internal control system as the set of accounting and administrative controls practice that helps to ensure that approved and appropriate decisions are made in an organisation. His definition was agreed upon by Mensah (2004) who suggested that the existence of a much more reliable and strong system can be of immense benefits to the good management of funds in schools of higher learning. An effective internal control measure forms the foundation for safe and sound business operations. It also reduces the possibility of significant errors and irregularities while helping with the timely detection of fraud and errors. The need for an effective internal control in the power sector cannot be undermined. The current problem in the power industry in Ghana is worrying to every citizen of Ghana and brings into mind whether there is no effective control system to properly manage the services.

1.1. Statement of the problem

The power industry of Ghana is the major power distribution company in Ghana having served the country since 1947 but was incorporated in 1997. As part of its core mandate of distributing power, it has also been mandated to receive revenue in the form of bill payments for services rendered. Over the years, the power industry has fallen short of these revenue collections hence missing their targets. These shortfalls in revenue collection have cost the taxpayer several millions of Ghana cedis coupled with the recent power outage which slowed down economic activities. Many reasons both internal and external have been attributed to the company's inability to collect the needed revenue accrued to it to render better service. Due to these problems, both the present and previous governments have tried to change the management of the company but to no avail. Moreover, customers have constantly reported of gross discrepancy between their actual bills and the estimated bills which affect their financial situation. This research tried to examine how effective internal controls in the power industry in Ghana can help to increase or straighten revenue mobilisation to further enhance and sustain the company in the attempt to deliver better service to the citizenry.

1.2. Objectives of the study

The general objective of the study is to examine the impact of effective internal controls of revenue mobilisation at the power industry of Ghana. The specific objectives of this study are as follows:

1. To ascertain whether effective internal controls are in place to help revenue mobilisation at the power industry.
2. To ascertain the extent to which internal controls help organisations in staying within budgets.
3. To compare internal controls to other avenues the company can use to increase its revenue mobilisation.

1.3. Research questions

The following research questions are set to meet the research objectives.

1. Is there any effective internal control measure in place to help increase revenue mobilisation at power industry?
2. To what extent has internal control helped power industry to stay within budgets?
3. What are the other avenues the power industry can utilise to increase its revenue mobilisation?

1.4. Scope of the study

The scope of the research will be limited to the power industry of Ghana. However, because of the vast size of the company and its presence almost across the length and breadth of the nation, the study narrowed down to the Kumasi main office of the Power industry to help examine the impact of effective internal control on revenue mobilisation so that the findings can be generalised to the rest of the centres in the country.

1.5. Significance of the study

This research work will fill the knowledge gap in the literature about the industry. Practically, the study will assist the board of directors and management of the company into knowing how effective internal control measures can help turn the fortunes of the company from not meeting its revenue targets. From policy perspective, the findings and recommendations will help government and policy makers to formulate effective guidance that will effectively measure and block leakages and wastage of revenues occurring in the industry. This will increase revenue and cause the company to survive the current challenges it faces. The research will help to solve the issue of income loss in most organisation with the implementation of an effective internal control measures. The general public will also realise the impact of internal control measures on their monthly estimated bills which will help to resolve the differences and dispute between the company and its customers so that better services such as uninterrupted power outage can be assured and reduced drastically.

1.6. Limitation to the study

Monetary constraints usually hampered study work; sample population could have been much bigger covering even the entire company across the country but due to resource constraints and time, the study was limited to only Kumasi. The respondents also delayed a little bit in responding to the questionnaire sent to them which delayed the process of analysis.

2. Literature review

This section reviews related literature already carried on by other authors on the research topic. It considers the key concept of internal control, the framework and advantages of the internal controls pertaining to the power industry. Models of internal controls such as COSO framework were, however, not considered as it might not be relevant to power industry in Ghana in this study.

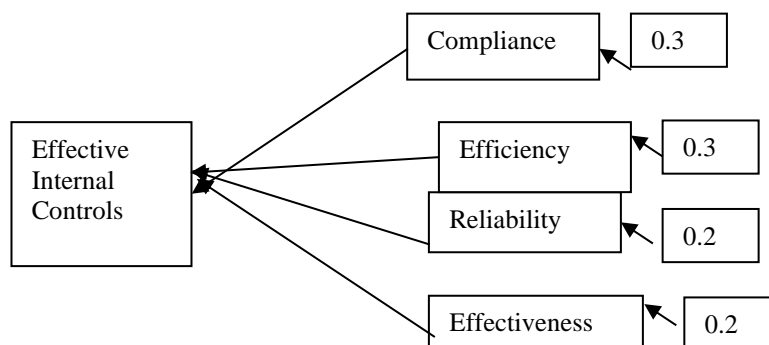
2.1. Concept of internal control

Internal control from the laymen’s point of view is an independent, objective, adequately designed and organised procedure, which through the technical and the scientific approaches assess how adequately the system of internal control functions. It is seen as the whole system of control employed by the management in order to carry on the business of the enterprise in an orderly and efficient way by having an automatic check and balance of the entire system. Internal control is not just a one-sided tool for controlling the order and rightness of certain situations, but it is a method of detecting the value added up to a company, achieving the index of effectiveness and profitability of the company. Again, the likelihood of achievements using internal controls will be affected by the limitations in the discharge of the control methods and that internal controls do not provide an absolute assurance to management but rather a reasonable one to management and board of directors that the organisation’s objectives will be achieved. In some sense, internal control systems help in ensuring that assets are secure and management policy is being properly adhered to.

2.2. Advantages of internal control system

Ewa and Udoayang (2012) on their part discussed the advantages of the internal control systems to a business or organisation entity. They outlined the following as first advantage of internal control system assures a high degree of accuracy and reliability of all the financial and operating information management receives. It also minimises occurrence of frauds and errors or any other irregularity, if not eliminates completely. Also, it safeguards assets against any misuse, promotes operational efficiency and prevents wastages. Not only that it also helps to judge operating efficiency and highlights weaknesses. Above all, it encourages adherence to the established managerial policies. These advantages are not exhaustive as the advantages can be discussed from different perspectives depending on the purpose of instituting the internal controls by the company.

2.3. Conceptual framework



Source: Author’s own construct

Sekaran (2003) defined conceptual framework as the conceptual model which combines the variables that are important to the research problem. It is also a pictorial view to the research problem. The figure above shows the conceptual framework and the relevant of effective internal controls. These variables are very important to every internal control system. All the variables are very important and consider by the organisations when implementing an internal control system. However, some organisations rate compliance (30%) and efficiency (30%) to be most important than reliability (20%) and effectiveness (20%).

2.4. The concept of revenue

Pandey (2007) defines revenue as that monetary event of asset values increasing in the organisation because of the physical event of production or sales of products and services of the organisation. Kloot (2009) on his part described revenue as income received for the sale of either products or services provided to customers. Jensen (2012) advised that, for better revenue generation and maintenance, organisations should critically take into consideration the customers and other stakeholders in business and establish how best they can satisfy their needs. Doyel (2005) also suggested to management of firms to continuously improve their revenue strategies while having an internal control system that is intervened with organisations operating activities. Revenue collection is most effective when controls are built into the organisations infrastructure in terms of continued improvement on performance standards as part of the competitive advantage of the organisation.

There is a strong relationship between internal controls and revenue mobilisation. According to Jensen (2012), internal controls and revenue generation systems including internal audits are intended primarily to enhance the reliability of financial performance, either directly or indirectly by increasing accountability among information providers in an organisation. Beeler, Hunton and Wier (1999) posited that internal controls provide an independent appraisal of the quality of managerial performance in carrying out assigned responsibilities for better revenue generation. Hanim Fadzil, Haron and Jantan (2005) described an effective internal control system as clearly correlating with organisational success in meeting its revenue target level.

Ittner, Larcker and Randall (2003) also discussing effective internal control on revenue generation posited that effective internal control for revenue generation and maintenance involves a regular review of the reliability and integrity of financial and operating information, it also involves the review of the controls employed to safeguard assets, assessment of employees' compliance with management policies, procedures and applicable laws and regulations, an evaluation of the efficiency and effectiveness with which management achieves its organisational objectives

3. Research methodology

3.1. Introduction

This section, which handles the methodology aspect of the study, includes all the methods adopted in attaining information in meeting the research objectives. It discusses the salient sub-topics such as the research design, population, sample and sampling procedures, the instrument used in data collection and ethical issues encountered during the data collection period.

3.2. Research design

According to Welman and Kruger (2001), research design is a plan according to which research respondents are selected in order to collect information. The study adopted descriptive study to help answering the questions regarding the what, where and how. The mixed method approach of both quantitative and qualitative methods was adopted. The quantitative approach is an approach which focuses on and compares larger groups of participants unlike the qualitative approach. Some of the advantages of the quantitative approach include the ability to gather more information than the qualitative approach. It also provides a rating or numerical information and allows for comparison between variables.

3.3. Population

Saunders, Lewis and Thornhill (2012) defined population as the total collection of subject or elements about which a researcher wishes to make inference and draw conclusions. Therefore, the population for this study is all the staff at the power industry of Ghana.

3.4. Sample and sampling procedure

The study selected 50 employees of the power industry at Kumasi main office as the size for the study. The employees at Kumasi main are shown in Table 1.

Table 1. Sample size of respondents at Kumasi main

Department	No. of respondents	Percentage (%)
Administration	7	14
Repairs and Maintenance	7	14
Finance	8	16
Metering	7	14
Fault Detection	7	14
Engineering	7	14
Stores	7	14
Total	50	100

From Table 1, it can be deduced that out of the 50 staff respondents to the questionnaire, apart from the finance department which accounted for 16%, all the others including administration, repairs and maintenance, metering, fault detection, engineering as well as the stores all accounted for 14% each. The sample size was chosen because the size is bigger and the findings can easily be generalised to other parts of power industry in Ghana.

3.5. Sampling technique

In choosing a sampling technique for the research, the purposive sampling method was used in selecting respondents to answer the questions posed to them. According to Palys (2008), purposive sampling signifies that one sees sampling as a series of strategic choices with whom, where and how the research is conducted. The purposive sampling is almost one and the same with qualitative research hence an ideal option for this study. Kumasi main office was strategically chosen as it is one of the largest power distribution office in the country serving large number of customers compared to other offices of the power distribution industry.

3.6. Data collection methods

There are basically two types of data collection methods; these are the primary and the secondary source of data collection methods. The study used primary source of data collection method. A structured questionnaire was developed to collect primary data. According to Saunders et al. (2012), a questionnaire is a research tool containing structured questions upon which data or information are collected. The questionnaire was designed into three main sections all geared towards answering the research objectives. The designed questionnaire was prepared and administered personally by the researcher to the respondents, this was a way of ensuring that all questionnaires administered were duly completed and returned on time. The questionnaire contains both numerical and non-numerical questions in an open- and closed-ended manner.

3.7. Ethical issues

Ethical issues have become very important in contemporary research. Respondents were very much concerned about the disclosure of their personal information publicly. However, with continuous interaction, the respondents were assured that the information provided will be used solely for the purpose of this research.

4. Analysis of data

4.1. Introduction

The study adopted a combination of descriptive, reliability and statistical tests on the 50 staff as respondents out of the entire staff of the power industry. Responses obtained were coded and analysed statistically through IBM SPSS.

Table 2 A results obtained from the respondents on the departments within the power industry that have instituted internal control measures?

Table 2. Departments with internal control measures

Response	No. of Respondent	Percentage
Finance	11	22
Maintenance	0	0
Metering	9	18
Technical	0	0
Stores	0	0
All of the above	30	50
Total	50	100

The question was posed to staff of the power industry on various departments which have instituted internal control measures. The main idea behind this research question is to establish whether all various departments within the power industry are implementing internal controls. From the raw responses gathered, 50% of respondents are of the opinion that all the departments of the power industry have some form of controls, and 18%, however, think the metering department has internal control measures while the remaining 22% agreed that the finance department also has internal control measures instituted. Maintenance, stores and technical department do not have any proper internal control in place.

In order to measure whether these internal control measures are effective, two categories of responses 'Yes or No' were posted to the 50 respondents. Analysis was done using compare means run from the IBM SPSS after the responses were coded.

Table 3. Case processing summary (responses)

	Included		Cases excluded		Total	
	N	Percent-No	N	Percent-yes	N	Percent
q1 * q2	2	11.1%	16	88.9%	8	100.0%

Table 4 Compare mean report

q1*q2	Mean	N	Std. Deviation
16.00	8.0000	1	.
84.00	42.0000	1	.
Total	25.0000	2	24.04163

Table 3 seeks to provide the responses to the effectiveness of the internal control measures which have been instituted at the power industry. From the responses, 88.9% agreed that these internal control measures are effective, whereas the remaining 11.1% agreed that these control measures are not enough effective. The standard deviation indicating the dispersion from the mean responses was 24.04, as shown in Table 4.

4.2. How has internal control helped the power industry in staying within budgets?

One sample t-test was run from the responses received from the respondents to test the statistical significant of the answers given to each of the six categories of variables assessed.

Table 5. One-sample statistics

	N	Mean	Std. Deviation	Std. Error Mean
q1	6	18.3333	16.90759	6.90250
q2	6	33.3333	34.52793	14.09597

Table 6. One-sample test

Test Value = 0						
95% Confidence interval of the difference						
	t	df	Sig. (2-tailed)	Mean difference	Lower	Upper
q1	2.656	5	0.045	18.33333	0.5899	36.0768
q2	2.365	5	0.064	33.33333	-2.9015	69.5682

The test indicates whether the unstandardised (or standardised) coefficients are equal to 0 in the population. If $p < .05$, then it can be concluded that the coefficients are statistically significantly different from 0. The t-value and corresponding p-value are located in the 't' and 'Sig.' columns in Table 6, respectively, As shown in the table, all the 'Sig.' column tested indicate variable coefficient different from 0 which indicate that internal control is statistical significant to help power industry to stay within budget.

4.3. What are the other avenues the power industry can use to increase its revenue mobilisation?

This research question seeks to find out from respondents whether there are other avenues other than internal controls which the power industry can use in increasing revenue mobilisation. Several questions were posed to the respondents through the questionnaire in order to arrive at the answers to this research question. Analysis of the data collected revealed that 28 respondents representing 56% believe there are other avenues while the remaining 22 respondents representing 44% believe that internal controls are the only avenue at increasing revenue at the power industry. In order to evaluate the internal consistency and reliability of their responses to the questions posed, reliability test using Cronbach's alpha was performed.

Table 7. Reliability statistics

Cronbach's alpha Based on			
	Cronbach's alpha	Standardised Items	N of Items
	0.943	1.000	4
Case Processing Summary			
		N	%
Cases	Valid	2	12.5
	Excluded ^a	14	87.5
	Total	16	100.0

^aListwise deletion based on all variables in the procedure.

Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. Cronbach's alpha of 0.943 indicates that there is an excellent and equally effective avenue as internal control measures which the power industry can rely on. Internal control and other avenues measured have relatively high internal consistency.

Discussion: it is the duty of management to analyse and update internal control measures in an organisation. Pandey (2007) posited that internal control system should be evaluated periodically to expose any lapses present, to know how strong or weak the system is. Management is in the position to override controls, which it has established, for its own interest. It is the management of an organisation that put in place the internal control system for smooth running and continuity of the enterprise. However, management has a way of affecting the internal control system and vice versa. When an internal audit system is set up by the management, it should be arranged in such a way that any misconduct or lapses in the system will be noticed. The consequence of management on internal control will be clear from the way in which they solve issues of misbehaviours or misconducts among workers. A good management ought to find alternative avenues in addition to ensuring effectiveness of the internal audit system to increase revenue. Finally, the competence and the integrity of the personnel operating the controls must be assessed regularly by management through proper selection and training to assure the organisation beyond reasonable doubt against fraudulent acts. Statistical test results obtained and the consistency of the internal control variables performed using Cronbach's alpha should service as guide to management in assessing the success of the internal controls.

5. Conclusions and recommendation

5.1. Conclusion

The research findings have established that there are internal control measures at the power industry and that not all the departments at the power industry have their own internal control measures. Management who serve as supervisors in ensuring that instituted internal control measures must analyse situations outside the box, however, many efforts in the area of supervision should be improved. It has also been established through the findings that internal controls have helped increased revenue at the power industry and that it has been able to achieve this success by reducing bottlenecks, reducing wastage as well as suppression and stealing. However, these are applicable to department with some form of internal controls. Internal control measures according to respondents are also effective in reducing waste and ensuring an increase in revenue at the power industry. Finally, majority of respondents believe that other alternative measures are equally effective as instituting internal control measures at the power industry when the industry is aiming at increasing its revenue.

5.2. Recommendations for future research

On the basis of the findings, government, management, supervisors and staff and all stakeholders should ensure that internal control measures at various departments of the power industry are followed to the letter. Supervisors should take keen interest in internal control measures, especially the ones that will enhance revenue generation. The board and management should institute stringent measures which will ensure that management stay within budgets in order to prevent the perennial losses recorded by the firm. Finally, future researchers must investigate power industry as a whole by taking larger sample so that their findings can be generalised to most of the Africa countries. Researchers must also focus on coming out with new theories and models focusing on the power industry in Africa as a whole.

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