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# Adeguacy of Internal Control System of the Seventh-Day Adventist Church-Owned Secondary Schools in the Philippines

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**This study examined the adequacy of internal control of the Seventh-day Adventist (SDA) Church-owned Secondary Schools in the Philippines. This study used the internal control framework suggested by Boockholdt (1996) as a basis to evaluate the adequacy of the sample schools' internal control and studied whether they are sensitive to size of students, size of staff, size of budget, years the school has been in operation, and level of computer dependence. The adequacy of internal control is based on users' perception and measured using Likert Scale while the sensitivity of the schools internal control to size of students, size of staff, size of budget, years the school has been in operation, and level of computer dependence is measured using Kruskall-Wallis non-parametric test. The result suggests that the SDA Church-owned Secondary Schools in the Philippines maintained an adequate internal control and that its adequacy is not sensitive to size of students, size of staff, size of budget, nor the age of the schools, however, the adequacy of internal control of the sample school is sensitive to the schools budget size.**

Key words: internal control, accounting control, administrative control, secondary schools.

## INTRODUCTION

Modern society is becoming increasingly dependent on accounting information system (AIS) to provide information that is needed for decision making. On the other hand, the complexity of accounting information system has also grown as a consequence of the complexity of the modern ways of doing business. Growth in complexity and the level of dependence on AIS has increased the risk of the system being compromised. A survey showed that 67% of companies have had security breaches in 2005 with 60% of them reported security losses (Romney & Steinbart, 2006).

Accounting errors and corporate fraud are serious problems particulary because of the amount of losses experienced by many organizations both business and non-business community. Landmark accounting frauds such as Enron Corp., WorldCom Inc., and Adelphia Inc. represent little chunk of monetary losses that arise from accounting frauds (Scott, 2006). The same problem exist in the non-business community, for example, the procurement program at the Department of Education, Cultural, and Sports (DECS) of the Republic of the Philippines were plagued by inefficiencies in late 1990s (Tenorio, 1999). Education institution, like any other organization face the same problems too, thus, an internal control system is required.

Internal control is one of the factors that will help ensure that actions are taken to address risks associated with the achievement of the objectives of educational institutions. This is consistent with the definition of internal control that looked at internal control that looked at internal control as actions taken by management to enhance the likelihood that established objectives and goals will be achieved (Hall, 2007; Flesher, 1996). This study attempts to determine the adequacy of internal control system in the secondary schools.

**Research Question.** This study aims to assess the adequacy of internal control system in the Seventh-day Adventist Church-owned and operated secondary schools in the Philippines. Specifically, this study seeks answers to the following questions: What is the degree of adequacy of the *accounting control*s in the Seventh-day Adventist secondary schools? How adequate are the *administrative control*s in Seventh-day Adventist secondary schools? Are the adequacy of *accounting control*s and *administrative control*s of the Seventh-day Adventist secondary schools sensitive to: a) number of students; b) number of employees; c) years in operation; d) degree of automation dependence; and e) budgetary support.

**Hipotesis**. There are no significant differences in the adequacy of *accounting controls* of the Seventh-day Adventist Church-owned and operated secondary schools in the Philippines when grouped according to: a) number of students, b) number of employees, c) years in operation, d) degree of automation dependence, and e) budgetary support. There are no significant differences in the adequacy of *administrative controls* of the Seventh-day Adventist Church-owned and operated secondary schools in the Philippines when grouped according to: a) number of students, b) number of employees, c) years in operation, d) degree of automation dependence, and e) budgetary support.

**Contribution of the Study.** In general, this study contributes to the vast amount of accounting information system particularly, internal control, literature. It provides understanding of the level of internal control in secondary schools which are

characterized by limited number of staff and budgetary support. In particular, this study will also benefit different groups in the following ways: The Seventh-day Adventists Church. This study provides understanding on the internal control system of the Seventh-day Adventist Church secondary schools. It will show how well the management of the respondent schools implement the administrative and *accounting controls* that could ensure the attainment of the Seventh-day Adventist Church objectives and the objectives of the respondent schools specifically.

Parties that provide the secondary schools with fund. This study provides them with information regarding the adequacy of the system that ensures an effective and efficient management of the scarce resources. The Seventh-day Adventist Church secondary schools. Result from this study provide management of the Seventh-day Adventist Church secondary schools with information that could become a basis for improvement in their current internal control system.

**Related Literatures.** Organizations are constantly facing threat of scarce mismanagement. Evidence show that most fraud taking place in the business world stems from lack of integrity and, thus, unable to behave ethically (Hall, 2007). For example, executives of momentuous corporate scandals such as Enron. WorldCom, Adelphia. Tyco, and HealthSouth, to name a few, have accumulated huge amount of wealth while their companies suffer in terms of performance. Hall (2007) pointed out that during the period 1999 to 2002 executives of 25 companies have together enriched themselves by about $25 billion while market value of their companies have plummeted by about 75% or more. In fact, all of the aforementioned companies have actually filed for bankruptcy.

Ethics is the principles, values, or norms that guide the decision process of an individual (Beauchamp, Bowie, & Arnold, 2008). Ethics is by large affected by integrity of a person. Lack of integrity leads to unethical decisions (Stanwick & Stanwick, 2008). Hall (2007) pointed out that lack of business ethics have led to multimillion dollar corporated fraud. Fraud is defined as, 'False representation of a material fact made by one party to another party with the intent to deceive and induce the other party to justifiably rely on the fact to his or her deteriment' (Hall, 2007, 9. 118).

In practice, fraud perpetrator intentionally deceives, uses company assets inappropriately, and manipulates information for the advantage of the perpetrators. Romney and Steinbart (2006) defines fraud in a broader scope by stating that fraud is any means used by a person to gain unfair advantage over another person. Losses from fraud can only be estimated because identified frauds are only the tip of the iceberg . Much fraud went unreported due to fret of bad publicity. The Association of Certified Fraud Examiners estimates that total losses arising from fraud in the United States (US) is $600 billion a year. Income-tax fraud in the US is estimated to be over $200 billion a year, while fraud in the US health-care industry is estimated to exceed $100 billion (Romney & Steinbart, 2006).

In the modern business world controlling the security and integrity of AIS is an important issue, particularly because people depends on business-related information in making business and other related decisions, and busines-related information is the product of an AIS. Some of the reasons cited as increasing risk faced by AIS are: a) increase in computer usage in the system, b) growth in computer networks which makes controlling information more difficult, c) the use of wide-area networks has provided suppliers and customers ability to access each other's system (Romney & Steinbart, 2006). Lack of protection on such systems increase the risk of AIS breach.

Companies are taking steps to better control their AIS. Many companies are devoting full-time staff to control and safeguard their system and to educate their employees about control measures. Hall (2007) defines internal control as policies a firm employes to safeguard the system's assets, ensure accruate and reliable accounting records and information, promote efficiency, and measure compliance with established policies. An effective internal control is required if an organization wants to ensure that its established goals and objectives will be achieved (Romney & Steinbart, 2006).

Internal control structure have gone through numerous make-overs such as, Control Objectives for Information and Related Technology (COBIT) framework, Committee of Sponsoring Organizations (COSO) framework, which is later revised into COSO's Enterprise Risk Management (ERM) Framework. The objective of COSO's internal control framework is to help organizations to: Provide reasonable assurance that company objecitves and goals are achieved and problems and surprises are minimized. Achieve its financial and performance targets. Assess risks continuously and identify steps to take and the resources to allocate to overcome or mitigate risk. Avoide adverse publicity and damage to the entity's reputation. The structure of COSO's internal control framework is presented in the following figure.

Figure 1. COSO Internal Control Framework


Romney and Steinbart (2006) provides in-depth explanation of COSO's internal control framework. The framework consists of five

components: control environment; control information and comunication; and monitoring, all of which influence the ability of the firm in achieving its objectives noted at the top of the figure. Attainment of these objectives: strategic; operations; reporting; and compliance, are neccessary to enable the firm to achieve its goals. The strategic and operations objectives are less controllable by the firm, therefore, internal environment (internal control) can only provide reasonable assurance that management are informed on a timely basis regarding the progress the company is making in achieving these objectives. On the other hand, reporting and compliance objectives are controllable by the firm, thus, internal environment can provide reasonable assurance that reporting and compliance objectives will be achieved.

The right hand side of the figure indicates that internal environment applies across different levels of organization, it applies at the entity level all through to subsidiaries. The front part of the figure presents the components of internal control. Each component are presented below. *Control environment* is one component of the traditionally grouped '*Administrative control*' (Wallace, 1995). It is related to the core of any business, its people. Control environment are the attributes of individuals which includes their integrity, ethical values, their competence, and the environment in which they operate. These are the foundation in which the other control components rests. This includes: Management philosophy, operating style, and risk appetite. The board of directors and its functioning. Commitment to integrity, ethical values, and competence. Organization structure. Methods of assigning authority and responsibility. Human resource standards. External influences. The above factors of control environment is necessary in ensuring a positive environment that is esesential for the operation of the other components of internal control.

*Control activities* are also traditionally known as *accounting control* (Boockholdt, 1996) are procedures established and executed to provide reasonable assurance that actions identified as necessary to address risks to achievement of the organization's objectives are carried out. Control activities fall into one of the following groups: Proper authorization of transaction and acitivities. Segregation of duties. Project development and acquisition control. Change management controls. Design and use of documents and records. Safeguarding assets, records, and data. Independent checks on performance.

Transactions and activities within a firm need to be properly authorized to avoid fraudulent or fictitious transactions. Incompatible functions such as custodial of assets, record functions, and authorization functions need to be separated to minimize the possibility of employee committing fraudulent act. It has to be pointed out that this activities; risk assessment; procedure can only minimize the possibility of fraudulent act because collution between employees in different function could still take place.

Development of information system and its related projects need to be controlled through adherence to a strategic master plan, project controls, data processing schedule, steering committee, system performance measurement, and post-implementation review. This will ensure that project development does not grow out of control which could be costly for the organization. Change management is related to development of information system. Developments of information system as a response to changes in environment result in changes. Change management is necessary to ensure that changes do not negatively affect the systems reliability, security, confidentiality, integrity, and availability.

Design and use of adequate documents and records is another control procedure that is used to ensure that documents and records are designed to minimize errors, promote efficiency in recording process, and facilitate for review and verification. This procedure would provide audit trail which is necessary for internal auditors and external auditors to verify transactions. Safeguard assets, records, and data are procedures to ensure the physical security/safety of assets including records and data. Furthermore, this procedure also ensures the logical safety and security of records and data. Restriction of access to assets, data, and record, both, physically and logically, are one concept that could be applied within this group of control.

Independent checks are necessary to ensure that transactions are processed accurately. Procedures such as, top-level reviews, analytical review, reconciliation of two independently maintained sets of records, comparison of actual quantities with recorded amounts, double-entry accounting, and independent review, are important to ensure that transactions are processed accurately and detect any potential errors or irregularities. *Risk Assessment* is also traditionally categorized as *administrative control* (Warren, Fess, & Reeve, 1996). All firms face risks and necessary actions should be taken to control these risks so that the objectives of the firm can be achieved. Once risks have been identified, their significance, their likelihood of occurence, and actions to address those risks need to be identified. *Information and communication* are controls that traditionally falls into *administrative control* (Warren, Fess, & Reeve, 1996) that ensure that information processing and communication of those information to necessary parties takes place properly. This procedure ensures that one of the objective of AIS, that is to provide information, is attained.

*Monitoring* also falls into *administrative control* category (Warren, Fess, & Reeve, 1996). It helps locate deficiencies and impove control effectiveness. Monitoring should take place continuously, such as

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through observation of employee behavior and warning signs from accounting system. Employee behavior such as change in lifestyle, refusal to take problem. Warning signs from accouning system such as missing documents, unusual increases in account size, backlog in transactions, etc. could all indicate problems.

These five component of internal control have been traditionally categorized into two groups. Control activities have traditionally fallen into *accounting control* category (Boockholdt, 1996) while control environment, risk assessment, information and communication, and monitoring, have traditionally be categorized as *administrative control* (Warren, Fess, & Reeve, 1996; Wallace, 1995). This study aims to find the adequacy of internal control of the Seventh-day Adventist Church owned secondary schools and whether it is sensitive to secondary school attributes, such as, size in staff, enrolled students, schools chronological age, computer dependence, and budgetary support.

## RESEARCH METHODOLOGY

The population of this study is the Seventh-day Adventist Church-owned secondary schools in the Philippines in 1998. Sample of this study is selected purposively based on the criteria of highest number of students enrolled and highest number of staff. It is believed that the higher the number of staff and students, the greater the amount of fund involved in the schools' operation and, thus, the greater the need for accountability. Regionally, the Seventh-day Adventist Church in the Philippines is divided into three georgraphical locations: operating in the northern part of the Philippines, the North Philippine Union Mission (NPUM); in the central Philippine, the Central Philippine Union Conference; and in the south Philippines, South Philippine Union Conference. The list of Seventh-day Adventist Church-owned secondary schools in the Philippines is presented in table 1.

Table 1. Seventh Day Adventist Church-owned Secondary Schools in the Philippines

| No. | Secondary Schools | Number of Students | Number of Employees |
|---|---|---|---|
| | NORTH PHILIPPINE UNION MISSION | | |
| 1 | Adventist University of the Philippines Northeast Luzon Campus Academy | 469 | 23 |
| 2 | Northern Luzon Adventist College Academy | 468 | 26 |
| 3. | Adventist University of the Philippines Academy | 385 | 20 |
| 4. | Pasay City Academy | 353 | 17 |
| 5. | Lipa Adventist Academy | 351 | 21 |
| 6. | Baesa Adventist Academy | 330 | 19 |
| 7. | Palawan Adventist Academy | 228 | 13 |
| 8. | Adventist University of the Philippines Naga View Academy | 198 | 10 |
| 9. | Tirad View Academy | 152 | 8 |
| 10. | Conception Adventist Academy | 147 | 9 |
| 11. | Central Luzon Adventist Academy | 116 | 14 |
| | CENTRAL PHIIPPINE UNION CONFERENCE | | |
| 12. | East Visayan Academy | 517 | 30 |
| 13. | Negros Mission Academy | 295 | 15 |
| 14. | East Visayan Adventist Academy | 295 | 14 |
| 15. | Weat Visayang Academy | 270 | 17 |
| | SOUTH PHILIPPINE UNION CONFERENCE | | |
| 16. | South Philippine Adventist College Academy | 351 | 17 |
| 17. | Mindanao Mission Academy | 308 | 20 |
| 18. | Matutum View Academy | 319 | 17 |
| 19. | Western Mindanao Academy | 262 | 18 |
| 20. | Northeastern Mindanao Academy | 187 | 11 |
| 21. | Lake View Academy | 176 | 10 |
| 22. | Mountain View College Academy | 143 | 8 |

*Population is for School Year 1997/1998

East Visayan Adventist Academy in the Central Philippine Union Conference was not included as the sample due to geographical difficulty in reaching the school location. The selected sample represents 59% of the overall population. The questionnaires were pre-tested at two academies, Adventist University of the Philippines Naga View Academy and at Central Luzon Adventist Academy. Respondents to the questionnaires are the principlas, vice principals, treasurers, chief accountants, accountants, and cashiers. The main instrument used in this study was questionnaire that was presented in a closed-ended form. The questionnaire was developed following the widely used Likert-Scale. Additionally, unstructured interview was also conducted for the purpose of getting more information. The study uses percentage and

mandatory vacation, frequent borrowings, excessive use of alcohol or drugs, etc. could all be signs of

weighted arithmetic mean in determining the adequacy of internal control. The adequacy of internal control was interpreted using the following Likert-Scale range:

| Range | Weight | Interpretation |
|---|---|---|
| 4.51-5.00 | 5 | Outstanding |
| 3.51-4.50 | 4 | Very Good |
| 2.51-3.50 | 3 | Fair |
| 1.51-2.50 | 2 | Very Poor |
| 1.00-1.50 | 1 | NotAccomplished |

Kruskal-Wallis was used to test for the sensitivity of the secondary schools internal control adequacy to size of staff, number of students, year in operation, computer dependence, and budgetary support. Based on the criteria, the secondary schools selected as sample is presented in table 2.

Tabel 2. Seventh Day Adventist Church-owned Secondary Schools in the Philippines Selected as Sample to the Study

| No. | Secondary Schools | Number of Students | Number of Employees |
|---|---|---|---|
| | NORTH PHILIPPINE UNION MISSION | | |
| 1 | Adeventist University of the Philippines Northeast Luzon Campus Academy | 469 | 23 |
| 2 | Northern Luzon Adventist College Academy | 468 | 26 |
| 3. | Adventist University of the Philippines Academy | 385 | 20 |
| 4. | Pasay City Academy | 353 | 17 |
| 5. | Lipa Adventist Academy | 351 | 21 |
| 6. | Baesa Adventist Academy | 330 | 19 |
| | CENTRAL PHILIPPINE UNION CONFERENCE | | |
| 7. | East Visayan Academy | 517 | 30 |
| 8. | Negros Mission Academy | 295 | 15 |
| 9. | West Visayan Academy | 270 | 17 |
| | SOUTH PHILIPPINE UNION CONFERENCE | | |
| 10 | South Philippine Adventist College Academy | 351 | 17 |
| 11. | Mindanao Mission Academy | 308 | 20 |
| 12. | Matutum View Academy | 319 | 17 |
| 13. | Western Mindanao Academy | 262 | 18 |

## FINDINGS AND ANALYSIS

*Adequacy of Accounting control.* Analysis of response to questionnaires reveals that the *accounting control* of the Seventh Day Adventist Church-owned Secondary Schools in the Philippines scores an average weighted mean of 4.22 which is interpreted as very good. Components of *accounting control* was also analized and the findings revealed that in terms of proper authorization of transaction, security for assets and records, segregation of duties, and adequate document and records all scored a weighted mean between 3.93 to 4.42, which is interpreted as very good. This finding indicate that respondents perceived the schools to have a very good level of *accounting control*.

*Adequacy of Administrative control.* Findings also reveal that the *administrative control* of Seventh Day Adventist Church-owned Secondary Schools in the Philippines scored an average weighted mean of 4.11, which is interpreted as very good. Analysis of the components of *administrative control*s reveals that the schools' control environment, risk assessment, monitoring, and information and communication scored weighted means between 3.88 and 4.38, all are interpreted as very good. This finding indicates that the respondents perceived the schools to have very good level of *administrative control*.

*Sensitivity of Accounting control Adequacy to Number of Students Enrolled, Size of Staff, Degree of Computer Dependence, and Budgetary Support.* Test of sensitivity reveals that the Kruskall-Wallis statistic (H-value) for number of students (0.13), number of employees (0.26), number of years in operation (0.08), and degree of computer dependence (0.86) are smaller than the tabular value of 3.841, which is the critical value of $\chi^2$ at the level of significan 0.05. This findings indicate that null hypothesis one is accepted for the four factors: number of students enrolled, size of employee, years in operation, and degree of computer dependence. Rejection to null hypothesis 1 leads to the conclusion that the adequacy of *accounting control*s of the respondent schools are not sensitive to number of students enrolled, size of employee, years in operation, and degree of computer dependence. On the other hand, the Kruskall-Wallis (H-value) statistic for budgetary

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support (4.59) is larger than the tabular value of 3.841, thus, the rejection of hypothesis null 1 for budgetary support. This findings indicate that adequacy of *accounting control* of the secondary schools is sensitive to the size of the schools budget.

*Sensitivity of Accounting control Adequacy to Number of Students Enrolled, Size of Staff, Degree of Computer Dependence, and Budgetary Support.* Test of sensitivity reveals that the Kruskall-Wallis statistic (H-value) for number of students (0.00), number of employees (0.34), number of years in operation (0.13), and degree of computer dependence (1.31) are smaller than the tabular value of 3.841, which is the critical value of $\chi^2$ at the level of significan 0.05. This finding indicates that null hypothesis 2 is accepted for the four factors number of students enrolled, size of employee, years in operation, and degree of computer dependence. Rejection to null hypothesis 2 leads to the conclusion that the adequacy of *administrative control*s of the respondent schools are not sensitive to number of students enrolled, size of employee, years in operation, and degree of computer dependence. On the other hand, the Kruskall-Wallis (H-value) statistic for budgetary support (4.00) is larger than the tabular value of 3.841, thus, the rejection of hypothesis null 2 for budgetary support. This findings indicate that adequacy of *administrative control* of the secondary schools is sensitive to the size of the schools budget.

## CONCLUSIONS

The general perception of the principal and the treasury staff of the Seventh-day Adventist Church-owned secondary schools in the Philippines is that the schools practiced adequate *accounting control*. In regards to the adequacy of *administrative control*, the general perception of the principal and the treasury staff of the Seventh-day Adventist Church-owned secondary schools in the Philippines is that the schools practiced adequate *administrative control*. The number of students enrolled in the schools, the size of staff, the amount of years the schools have been operating, and the level of computer dependence appear to have no influence on the *accounting control* adequacy of the Seventh-day Adventist Church-owned secondary schools in the Philippines. However, the size of school budget have influence on *accounting control* adequacy of the secondary schools. Furthermore, it was found that the number of students enrolled in the schools, the size of staff, the amount of years the schools have been operating, and the level of computer dependence appear to have no influence on the *administrative control* adequacy of the Seventh-day Adventist Church-owned secondary schools in the Philippines. However, the size of school budget have influence on *administrative control* adequacy of the secondary schools.

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