

COMPARATIVE PERFORMANCE ANALYSIS BETWEEN OLD AND NEW MANAGEMENT SYSTEM OF FOUNDATION BANDUNG ADVENTIST UNIVERSITY OF INDONESIA (BAUI)

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Abstract

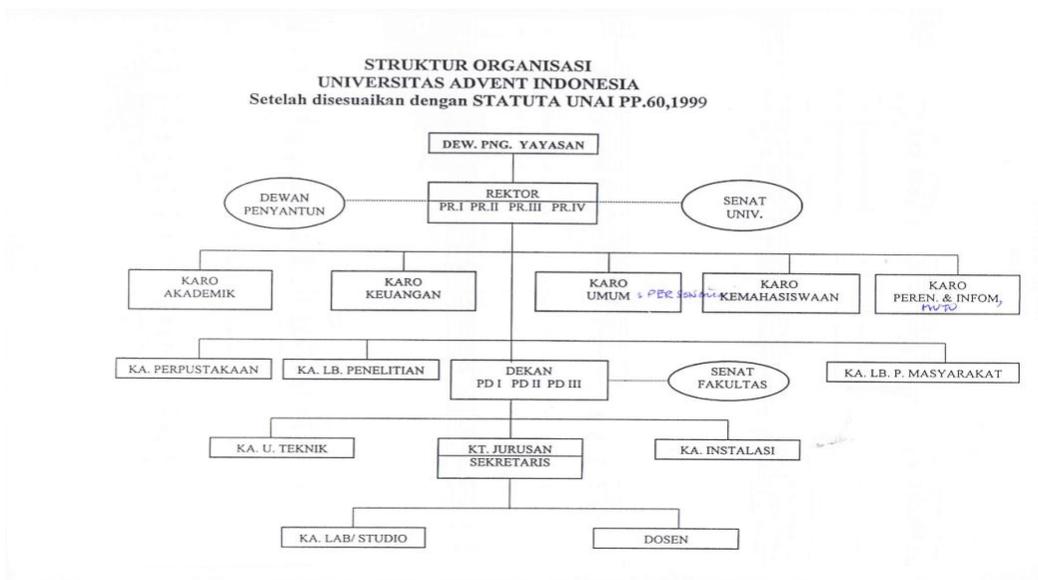
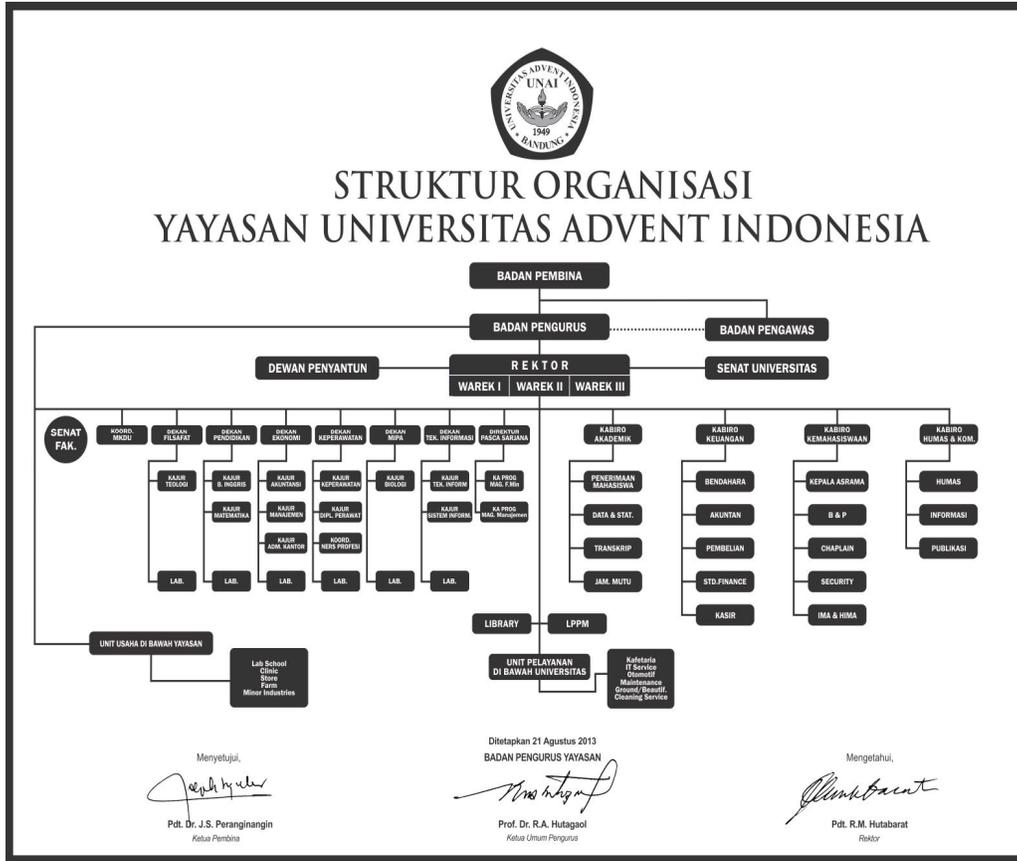
The purpose of this research is to investigate whether or not under the new management system of Bandung Adventist University of Indonesia give a significant improvement to financial performance and to student body. The BAUI was evaluated over the time period 2007 to 2013, using panel data and time-series analysis. Research methodology was to count means, standard deviations and making analysis the difference between performance before and after the implementation of new management system of Bandung Adventist University of Indonesia using paired sample t - test with significant level at $\alpha = 0.05/2$ using SPSS for all analysis of variable financial ratios. Based on empirical findings, after new management system of Bandung Adventist University shows that cash ratio and debt ratio increased significantly. It means cash availability was much bigger significantly after the new management system. But at the same time, debt was also increase significantly after new management system. while all other financial measures such as return on sales, return on assets, return on equity, current, quick and total assets turnover have no difference of performance significantly. Over all, the change of new management system contributed no improvement to Bandung Adventist University of Indonesia, however there is no significant difference between the number of students before and after the new management system (0.237) at $\alpha = 0.05/2$.

Keywords: *Financial Ratios, Evaluation, Bandung Adventist Hospital*

Background of the Study

The new change of organizational structure of foundation was established in 2010 to substitute the old structure. Under the new system (see figure 1), foundation workers get pay and work as full time workers at the same place of rectorate building. Under the old system (see figure 2), people of foundation have no office, they only voluntarily worked as the board committee members of BAUI who conducted meeting once a month for university. Under the old system, all the operations of BAUI were managed under the leadership of rector. But in the new system, there is a division of authority between foundation and rectorate. Academic affairs were held by the leadership of rector. And facilities and human resources are under leadership of new foundation. In other words, at the old system of BAUI, rector hold greater authority

than the new system. The change could be seen as it is shown in organizational structures figure I and figure 2.



Since the new system university has been introduced, BAUI has been implementing the new management system on 2010. The question is that whether or not the implementation of the new management system helps to improve the performance of this university. This study will investigate whether or not under the new management system give a significant improvement to financial performance and to student body of Bandung Adventist University of Indonesia.

Objectives of the Study

This study aims to examine the comparative financial performance and efficiency of Bandung Adventist University of Indonesia under the new management system.

1. Investigate the impact of the organizational new agent system on the financial and efficiency performance of Bandung Adventist University of Indonesia (BAUI)
2. Examine and compare the efficiency and productivity growths of BAUI under the organizational new agent system over the test period.
3. The BAUI was evaluated over the time period 2007 to 2013, using panel data and time-series analysis.

The efficiency changes and financial performance was analyzed over the time period 2007-2013. The period of analysis was divided into two periods: four (3) years prior to the existence of new Adventist agent of foundation and the succeeding four (3) years after its existing intervention on BAUI. The pre-X BAUI period covered from July, 2007 to June, 2010. The post BAUI period covered from July, 2010 to June, 2013. This study then has been designed to assess the long-term effects of efficiency and financial performance of the BAUI. This study represents the first empirical work on financial performance of BAUI . At present, there is no study that measures the financial performance and student body before and after the implementation of new agent foundation

The results of this study can also serve as a benchmark for further studies on financial performance and student body in other University. Finally, findings to be derived in this study would serve as an effective guide for Adventist University in

determining the sources improvement of financial performance factors that affect the productivity performance of BAUI in for an effective management guide towards performance improvement.

Conceptual Model/Literature Review

Principal of Agency Theory

Agency theory is about working relationship between one party to another party. One party hire another party to do the work. In this relationship the party which is hired called agent and the other is called the principal. Agents are supposed to act in the sole interest of their principals.

Agency Theory explains how to best organize relationships in which one party determines the work while another party does the work. In this relationship, the *principal* hires an *agent* to do the work, or to perform a task the principal is unable or unwilling to do. For example, in corporations, the principals are the shareholders of a company, delegating to the agent *i.e.* the management of the company, to perform tasks on their behalf. Agency theory assumes both the principal and the agent are motivated by self-interest. This assumption of self-interest dooms agency theory to inevitable inherent conflicts. Thus, if both parties are motivated by self-interest, agents are likely to pursue self-interested objectives that deviate and even conflict with the goals of the principal.

Agency theory has been used widely for years in many difference areas of disciplines. Bratton (2008) wrote that agency theory related with delegation of authority in terms of control and decision making about a certain tasks to another party (the agent). For decades, many scholars have employed agency theory to explain relations in different disciplines such as education (Kivisto, 2005), management (Eisenhardt, 1988), economics and finance (Sappington, 1991), information systems (Mahaney and Lederer, 2003), insurance industry (Ray, 1989), and human behavior of supplier (Zsidisin, 2003).

Principle-agent theory arises in a business management context associated with behavioral studies of employer-contractor or employer-employee interactions but it can be applied to public and non-profit settings as well.

The central dilemma investigated by principal agent theorists is how to get the employee or contractor (agent) to act in the best interests of the principal (the employer) when the employee or contractor has an informational advantage over the principal and has different interests from the principal. Kang (2013) study the the principal - agen (owner - manager) problem with moral hazard. Agency costs are a type of *transaction cost*, reflecting the fact that without cost, it is impossible for principals to ensure agents will act in the principals' interest. Agency costs include the costs of investigating and selecting appropriate agents, gaining information to set performance standards, monitoring agents, bonding payments by the agents, and residual losses.

In addition to recognizing that contract management involves agency costs, one may also observe that the informational advantage of the contractor regarding performance means that the contractor may be able to impose high agency costs by resisting the principal's effort to gain information. The more difficult for the principal to gain information on performance outcomes, the more likely that contracts will be framed instead in terms of contractor behavior. The more uncertain the outcomes, the more the principal will have an incentive to resist the principal's information-gathering efforts so as to encourage behavioral rather than outcome performance standards. This is a form of the effectiveness (outcome) vs. efficiency (behavior) distinction common in administrative literature (Sappington,1991).

Financial Performance

The most common method to analyze financial performance is to use ratio analysis (Brealey et al, 2012; Ross et al, 2010). Financial ratios have achieved widespread use in practice because their relative easy of computation and interpretation for readers of financial statements. The ratios also enable the analyst to conduct a certain degree of comparison across firms of different sizes and of firms with the total industry. Obviously, any number of ratios can be calculated from the typical corporate financial statements, each reflecting unique aspect of a company.

Managers and employees alike should try to attain organizational goals as efficiently as possible. Hellriegel et al (2010) cited that efficiency is achieved by both minimizing inputs (e.g., labor, land, and capital) and maximizing productive outputs. For example, if technologies are available that allow a firm to produce goods or deliver services at a lower cost, it should do so regardless of the consequences in terms of

layoffs, retraining costs, or moving production overseas to obtain lower wages and be subject to fewer restrictive regulations. Stoner et al (2010) explained that efficiency-the ability to do things right-is an “input-output” concept. An efficient manager is one who achieves outputs, or results, that measure up to the inputs (labor, materials, and time) used to achieve them. Managers who are able to minimize the cost of the resources needed to achieve goals are acting efficiently. Effectiveness as contrast, involves choosing *right* goals. A manager who selects an inappropriate goal-say, producing mainly large cars when demand for small cars is soaring-is ineffective manager, even if the large cars are produced with maximum efficiency. No amount efficiency can make up for a lack of effectiveness.

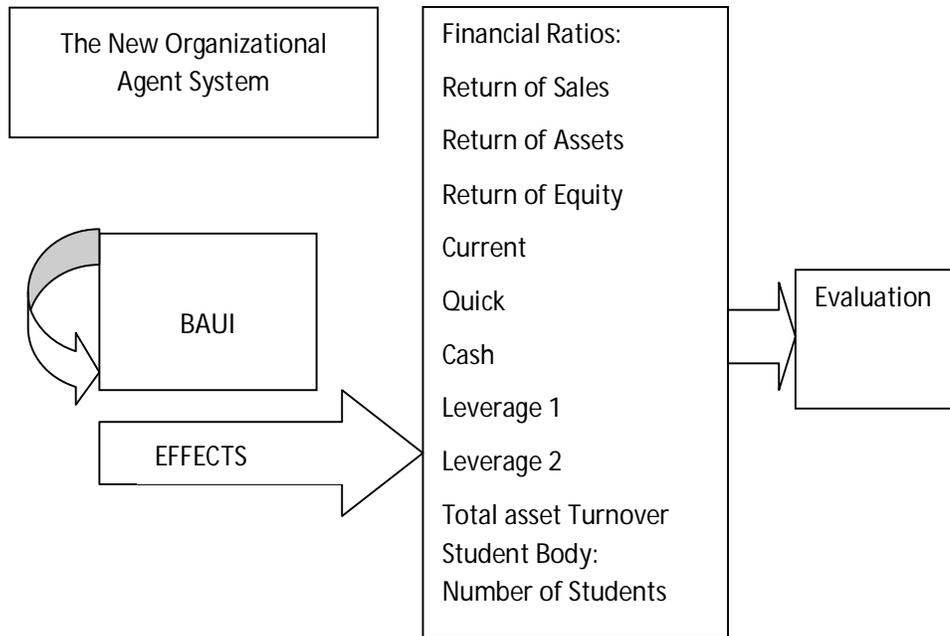
Production is a process for transforming a set of inputs X into a set of outputs Y. The transformation process takes place in the context of a body of knowledge called the production function. An idealized production is given by $Y \leq f(X)$ where $f(X)$ is the production frontier. The continuous increase in productivity is a key to maintaining the competitive positions.

However, Hellriegel et al (2010) stated that no standard measures of productivity apply to all organizations. The most commonly used general measure is total-factor productivity, which is the ratio of total outputs (amount of goods and services produced) to total inputs (quantities of labor, capital, and materials used). This indicator of economic efficiency is normally expressed in monetary terms. In contrast, partial-factor productivity is the ratio of total outputs to a single input. Examples of partial productivity ratios are (1) units produced per day divided by labor hours of production employees per day, and (2) store sales per month divided by labor hours of sales personnel per month. These and other measures are meaningful only if the outputs produced are sold.

Conceptual Framework

The conceptual framework of the study is shown below:

Figure 3 The Conceptual Model



Financial ratio involves computation and interpretation for readers of financial statements (Beaver et al, 2005). Thus, it is but the best and most appropriate to employ such suitable methods in evaluating this present research. Four classes of financial ratios; profitability ratios (return on sales, return on assets, and return on equity), liquidity ratios (current ratio, quick ratio, and cash ratio) use leverage ratios (Lev1 = total debt/total assets; Lev 2 = total debt/total equity) and efficiency ratio (total asset turnover) in the evaluation of corporate financial position and performance.

Research Methodology

The research design consist of main focus of the study, time period of the study and types of analysis employed to address the main statement of the problem. The data sources summarize the sources of data from Bandung Adventist University of Indonesia. Data analysis was treated with three steps (Atmajaya, 2009) on the performance of BAUI in terms of Financial Ratios and Student Body:

1. First step was to count mean before and after the implementation of new management system of BAUI.
2. Second step was to count standard deviation before and after the implementation of new management system of BAUI.

3. Making analysis the difference between performance before and after the implementation of new management system of BAUI using paired t - test with significant level of $((\alpha) = 0.05/2$ for all variable financial ratios.

The following are test criterion given for the study:

1. If $\text{sig } t > 0.05/2$ the null hypothesis, H_0 : there is no difference between performance before and after implementation of new management system (Santoso, 2013; Siregar, 2013).
2. If $\text{sig } t < 0.05/2$ the null hypothesis, H_a : there a difference between performance before and after implementation of new management system (Santoso, 2013; Siregar, 2013).

Research Tests and Discussion

Table 1
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	ROSBEP	.049147	3	.0757758	.0437492
	ROSAFT	.012442	3	.0432044	.0249441
Pair 2	ROABEF	.028746	3	.0433126	.0250065
	ROAAFT	.011976	3	.0378069	.0218278
Pair 3	ROEBEF	.030739	3	.0460521	.0265882
	ROEAFT	.013864	3	.0433882	.0250502
Pair 4	CRBEF	1.736868E1	3	4.0394009	2.3321492
	CRAFT	8.236057E0	3	1.2621357	.7286944
Pair 5	QRBEF	1.712108E1	3	3.9988644	2.3087454
	QRAFT	8.099847E0	3	1.2592514	.7270291
Pair 6	CASHBEF	1.225229E1	3	1.8439655	1.0646140
	CASHAFT	5.284542E0	3	1.8193283	1.0503897
Pair 7	DTABEF	.072328	3	.0135444	.0078198
	DTAAFT	.119864	3	.0112309	.0064841
Pair 8	DTEBEF	.078120	3	.0157861	.0091141
	DTEAFT	.136246	3	.0145750	.0084149
Pair 9	TATOBEP	.581703	3	.0275901	.0159291
	TATOFT	.792211	3	.1096003	.0632778

Table 2
Paired Sample Test

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	ROSBEF ROSAFT	.0367057	.0870125	.0502367	-.1794455	.2528568	.731	2	.541
Pair 2	ROABEF ROAAFT	.0167697	.0572468	.0330515	-.1254393	.1589787	.507	2	.662
Pair 3	ROEBEF ROEAFT	.0168749	.0627662	.0362381	-.1390450	.1727949	.466	2	.687
Pair 4	CRBEF CRAFT	9.1326209 E0	3.6145409	2.086856 1	.1536037	18.1116382	4.376	2	.048
Pair 5	QRBEF QRAFT	9.0212286 E0	3.5540352	2.051923 2	.1925157	17.8499415	4.396	2	.048
Pair 6	CASHBEF CASHAFT	6.9677525 E0	1.5157794	.8751356	3.2023477	10.7331573	7.962	2	.015
Pair 7	DTABEF DTAAFT	- 4.7536853 E-2	.0034143	.0019712	-.0560183	-.0390554	-24.115	2	.002
Pair 8	DTABEF DTAAFT	- 5.8125486 E-2	.0033756	.0019489	-.0665110	-.0497399	-29.824	2	.001
Pair 9	TATOBEP TATOFT	- 2.1050795 E-1	.0959914	.0554207	-.4489638	.0279479	-3.798	2	.063

There are four main categories of performance measures employed in this research: profitability, liquidity, leverage and efficiency. These four categories of measures and their corresponding statistical tests are assessed below for each firm and as for the full sample.

Table 3
Measurement of Financial Performance

Measures	Variables
Profitability	Return on Sales = Net Income/Sales
	Return of Assets = Net Income/Total Assets
	Return on Equity = Net Income/Equity
Liquidity	Current Ratio = Current Assets/Current Liabilities
	Quick Ratio = (Cash + Receivables)/Current Liabilities
	Cash Ratio = Cash/Current Liabilities
Leverage	Debt to Asset = Total Debt/Total Asset
	Debt to Equity = Total Debt/Equity
Efficiency	Total Asset Turnover = Sales/Average Total Assets

Table Paired Samples Test shows overall financial results for Bandung Adventist University of Indonesia before and after the implementation of new system of foundation. Profitability and liquidity measures showed no significant improvements after new management system, except cash ratio. Cash ratio increased from 1.2252 to the high of 5.2845 after new management system. Its sig (2-tailed) was 0.015 at $\alpha = 0.05/2 = 0.025$. This implies that cash improved after the new management system.

Both leverage ratios such as debt ratio and debt equity ratio increased significantly. The average debt ratio before new management system was 7.24 percent increased to 11.98 percent after the new management system. Its sig (2-tailed) was 0.015 at $\alpha = 0.05/2 = 0.025$. This implies that debt of Bandung Adventist University-Indonesia increased after the implementation of new management system. Likewise, The average debt equity ratio before new management system was 7.81 percent increased to 13.62 percent after the new management system. Its sig (2-tailed) was 0.015 at $\alpha = 0.05/2 = 0.025$. This implies that debt of Bandung Adventist University of Indonesia increased significantly after the implementation of new management system.

Finding show that Total Asset Turnover ratio has no improvement after the implementation of new management system. Its sig (2-tailed) was 0.063 at $\alpha = 0.05/2 = 0.025$. It statistically means that value of sig = 0.063 is bigger than value of $\alpha = 0.025$ implies that there is no improvement of performance.

Table 4
Students Before and After New Management System

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre	1.0750	3	182.60066	105.42454
	Post	1.4737	3	230.50452	133.08185

Paired Samples Test						
		Paired Differences		T	df	Sig. (2-tailed)
		Mean	Std. Deviation			
Pair 1	Pre - Post	-3.99E+02	413.0682	-1.672	2	0.237

Table 4 above indicate that there is no significant difference between the number of students before and after the new management system of BAUI with Sig. value of 0.237 at $\alpha = 0.05$. However, actually there is a quite large number difference of students with average of 1075 pre new management system and 1473 average of students after the new management system from 2007-2012.

Conclusion

Based on empirical findings, after new management system of Bandung Adventist University shows that cash ratio and debt ratio increased significantly. It means the of cash availability was much bigger significantly after the new management system. But at the same time, debt was also increase significantly after new management system. While all other financial measures such as return on sales, return on assets, return on equity, current, quick and total assets turnover have no significant difference on performance. On the other hand, on the number of students there is no significant difference between the number of students before and after the new management system of BAUI. Over all, the change of new management system contributed no improvement to Bandung Adventist University of Indonesia.

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