Effects of Key Management Compensation on Financial Performance of Listed Manufacturing Firms in Kenya

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Abstract

The aim of this study was to investigate the effects of management compensation on financial performance in Kenya using case of listed manufacturing firms. The study employed census method of data collection and secondary data sources over a period of 9 years, 2010-2018, for 15 listed manufacturing firms. The agency theory complemented by the contingency, self-determination, and expectancy theories was used in the study. The data was analyzed using ordinary least squares regression analysis model as well as the descriptive methods. Eviews software was employed in the data manipulation. The key finding of the study was that key management compensation was strongly positively associated (correlated) with the financial performance of listed manufacturing firms in Kenya while Director Emoluments affect financial performance of listed manufacturing firms negatively but not strongly. Another finding was that debt ratio highly negatively and statistically significantly influenced the relation between management compensation and financial performance of listed manufacturing firms in Kenya suggesting that debt is an important factor in determining the relation between management compensation and financial performance of listed manufacturing firms in Kenya. The findings of the study are important in that they can be employed in formulating policy initiatives and strategies for improving financial performance of firms in the country.

Keywords

key management compensation, financial performance, listed manufacturing firms, agency theory, expectancy theory
1. Introduction
The historical context of labor compensation runs from the 1920s to modern day. There were centuries where unpaid slave labor was explicitly legal and normalized and where women were restricted from entering the work force. Before Industrial Revolution, craftwork was the primary means of goods production with many workers being self-employed or working in small shops. It was in the 20th century that systems of large scale urban production and employment were developed. With the development of machines and standardized parts, companies could start enhancing their production by employing thousands of workers to assemble complex products (Caudill & Porter, 2014).
In the context of labor economics, the price of wage is influenced by the forces of demand and supply of labor and skills just as is the price of any commodity. From the agency (contract) theory, the behavior of the worker and the employer (firm), is influenced by the information asymmetry which means that one party has more knowledge than the other, a phenomenon known as the principal-agent problem. Compensation and its delivery are tools considered appropriate in driving worker productivity maximization. Contemporary debate is rife especially in the US concerning the effectiveness of executive bonuses as a result of the 2008 financial crisis (Spector & Spital, 2011).

2. Literature Review
2.1 Governing Theories
The agency theory interprets the relationship between the agent and the principal through the metaphor of a contract, where the principal delegates responsibility and influence to an agent (Shapiro, 2005; Nouray & Daroca, 2008; Jensen & Meckling, 1976). Within the context of reward systems, the agents are the top management of the firm, and the principals consist of the shareholders of the firm. According to Eisenhardt (1989), when a principal gives the agent an employment, the agency problem may arise because of conflict of interest and asymmetric information. An underlying assumption of the agency theory is that the agent is mainly driven by self-interest and will act in ways most favorable for him raising the problem of conflict of interest in the contract between the agent and the principal (Jensen & Murphy, 1990). Another problem in the principal-agent relation is related to asymmetric information characterized by a lack of control where it becomes too demanding for the principal to control and confirm that the agent is doing what he or she is supposed to do.
Sloof and Praag (2007) and Vroom (1964) explain that the view held within agency theory is connected to expectancy theory which explicates the relationship of incentive systems and the motivation of the individual. Expectancy theory is built on three assumptions of an individual’s perception that effort is linked to performance, the individual’s expectation that received compensation is linked to performance, and that the individual’s motivation is driven by received reward which in turn increases a person’s performance (loof & Praag, 2007; Kominis & Emmanuel, 2007). The agency problem between the owners of a company and the top management can be addressed through an incentive system in that the incentive system will allow firm owners to tie the interests of the top management to
the performance of the company, and thereby assure that the agent will act in a way that is in line with the interests of the owners (Shapiro, 2005).

Self-determination theory (SDT) is highly connected to a person’s behavior and work motivation and addresses personal distinctions oriented towards the regulation of one’s conduct and actions (Frey & Jegen, 2001; Gagné & Deci, 2005). Three motivational forms are distinguished within the STD: amotivation where a person is completely without self-determination and can neither be internally or externally motivated, extrinsic motivation where a person’s self-determination can be driven by external factors including reward incentives, and intrinsic motivation which is invariably self-determined. Within the context of reward systems, the top management compensation is an external reward, which is presumed to increase motivation. A central aspect within the SDT is the clear distinction between autonomous behavior and controlled behavior (Gagné & Deci, 2005) where the controlled behaviour occurs due to external pressure or external reward (the extrinsic motivation) which arises when a person is motivated by external factors to act in a specific way in order to get the opportunity to achieve the reward. In the context of incentive systems, management compensation constitutes of an external reward and a mechanism to control behavior (Dworkin, 1988). The extrinsic motivation part is further important when attracting the most desirable top management to the firm. The interaction between intrinsic and extrinsic motivation is dependent on the assignment at hand as well as circumstances in the environment. The total amount of a person’s motivation is dependent on both intrinsic and extrinsic motivation such that by increasing one part, the other part may be reduced and a crowding-out effect can occur (Walton, 2012).

2.2 Determinants of Management Compensation

Violeta (2015) distinguished between two categories, the external and internal, as determinants of executive compensation based on the firm operating environment. The external determinants of executive compensation include labor market conditions, the country’s level of wages, the economic activity engaged in by the company, living standards, the government policy, company ownership and trade unions whereas the internal factors comprise the unique value of the task, relative value of the employee, size of company and the ability of an employer to pay a certain amount of pay. Drawing from classical economic theory, Kakabadse, and Kouzmin (2004) explain that the amount paid in wages is based on the labor market while drawing from the efficiency wage theory, Halaby (2014) explains that the employer will expect return on his investment on the employee through increased productivity and efficiency in execution of duties and tasks. The willingness of the organization to pay more than the current is based on the hope that the higher pay will stimulate increased productivity.

2.3 Management Compensation and Financial Performance

Lindstrom and Svensson (2016) investigated the relation between the top management pay and the financial performance of the firm using a sample of 900 large Swedish firms over period 2010-2014 and four control variables including firm size, growth, debt, and risk. Firm performance as the dependent variable was operationalized by firm performance ratio as a combined performance
measurement of three financial indicators: ROE, ROA and profit margin, so as to decrease the risk of industrial bias. Top management variable compensation as the independent variable was operationalized as ratio of bonus and variable pay to total compensation. The study employed correlation analysis (Pearson product-moment correlation) and an Ordinary Least Square (OLS) regression analysis and found a weak positive effect of variable compensation on firm performance.

Oyerogba, Riro, and Memba (2016) studied the relation between executive compensation and firm profitability of a sample of 70 companies listed on the Nigeria stock exchange over the period of 2004-2013 for six industries (Banking, Food and Beverages, Breweries, Healthcare, Automobile and Industrial/Domestic products). The study employed both descriptive and inferential statistics methods of data analysis and revealed that a significant positive relationship exists between the directors’ cash incentives, bonus issue of share and earnings per share. The relationship between non cash incentive and earnings per share was insignificant. Kibet (2014) investigated the relationship between the CEO compensation and firm performance for 20 publicly listed companies in the UK over the period 2008-2010 using OLS regression analysis. The showed a significant and positive relationship between the CEO compensation and firm profitability.

Injeni (2010) investigated the relationship between management compensation and firm performance for 37 companies listed in the Nairobi Securities Exchange (NSE) over period 2003-2008 and found that while the management compensation continued to increase, the firm performance tended to stagnate and even declined. The regression results showed mixed results with various proxies of firm performance including revenue growth, net profit margin, return on investment, return on equity, earnings per share, and share price growth. Ozkan (2011) studied the association between CEO pay and firm performance of a sample of 390 UK non-financial firms over the period 1999-2005 using total compensation, cash and equity-based components of CEO compensation and board size as independent variables. The study reported a positive and significant relationship between CEO cash compensation and firm performance and a positive but insignificant association between total compensation and firm performance. Further, the study found that firms with larger board size pay their CEOs higher level of total compensation.

Sigler (2013) studied the relationship of CEO pay and company profitability for 280 firms listed on the New York Stock Exchange over the period 2006-2009. The study employed CEO pay as the proxy for monthly salary, cash compensation and total compensation while the company profitability was measured by return on equity. Both descriptive and inferential statistics, revealed a positive and significant relationship between total CEO compensation and company profitability. Further, the study showed firm size to be the most significant factor determining the level of total CEO compensation and that the tenure of the CEO was a significant variable that influenced return on equity. Since total compensation may include monthly salary and cash compensation, there is possibility of multi-collinearity in data which might have affected the result.

Suherman, Wulan and Agung (2011) investigated the relationship between firm profitability, corporate governance, and executive compensation for a sample of 13 financial companies listed on Indonesian
Stock Exchange over the period 2007-2009. The study reported a positively statistically significant relationship between executive compensation and firm profitability measured by ROA. Further, the study reported an insignificant relationship between executive compensation and firm profitability measured by Total Shareholders’ Returns (TSR). Yongli and Dave (2012) studied the relationship between executive compensation, ownership structure and firm profitability of Chinese financial corporations over the period 2001-2009 using secondary data. The study reported that private companies tend to pay CEOs higher and that CEO compensation is negatively associated with firm profitability measured both by ROE and ROA. This implies that the higher the CEO compensation in Chinese financial corporations, the lower the firm value or firm profitability. High CEO compensation deteriorates firm value, which is consistent with relation-based theory. Using secondary data of firms listed on the Portuguese Stock Exchange, Fernandes (2008) studied the relationship between executive compensation and firm profitability. Both descriptive and inferential statistics show that firm profitability does not significantly depend on the executive compensation and that the wealth of the shareholders is not affected by executive compensation. Further, the study reported that company size is a major determinant of executive compensation implying that CEOs in large and profitable organizations receive the highest compensation.

Niresh and Velnampy (2014) explored the effects of firm size on the profitability of 15 listed manufacturing firms in Sri Lanka using correlation and regression analysis. The authors employed Return On Assets (ROA) and Net Profit (NP) as indicators of firm profitability and Total Assets (TA) and Total Sales (TS) as indicators of firm size. Correlation and regression methods have been used in the empirical analysis. The study found no indicative relationship between firm size and profitability of the listed manufacturing firms in Sri Lanka. Ali (2017) studied the moderating effect of firm size on the relationship between strategic planning and firm performance of 191 manufacturing firms in Kenya using cross-sectional survey design. The study found that while strategic planning was statistically significant and positively related to firm performance, firm size did not reveal moderating effect on the relationship between strategic planning and firm performance.

Babalola (2013) studied the effect of firm size on firm profitability of manufacturing companies listed in the Nigerian Securities Exchange using panel data over the period 2000-2009. Profitability was measured by return on assets while both Total Assets (TA) and Total Sales (TS) were used as the proxies for firm size. The study found positive effect of firm size (both total assets and total sales) on the profitability of manufacturing companies in Nigeria. Abdukadir (2016) studied the effect of leverage, liquidity and firm size on the financial performance of listed non-financial firms in Kenya using panel data over the period 2009-2013. Return On Equity (ROE) and Return On Assets (ROA) were employed as proxies for financial performance. The study found that liquidity and firm size affected the financial performance of listed non-financial firms at NSE positively while leverage had no effect. The implication of finding on the firm size is that managers should expand their businesses
investing more through the opening of new branches to widen their market shares to boost financial performance.

Raithatha and Komera (2016) studied the relationship between management compensation and firm performance of 3100 companies in India. The study employed ROE and ROA as proxies for firm performance, management pay as indicator for management compensation, and market based measures (Tobin Q and stock return) and firm size as control variables influencing the management compensation and firm performance relationship. The study found that firm performance was affected by management compensation and firm size and that the relationship was not influenced by the market based measures. Lindstrom and Svensson (2016) investigated the relation between the top management variable pay and the financial performance of the firm using a sample of 900 large Swedish firms over period 2010-2014. The study employed firm size among four control variables, measured as the logarithm of the firm’s total annual revenue in line with previous research (Mehran, 1995; Elayan, Lau, & Meyer, 2003). The authors explain that larger firms may have more potential to pay out incentives, relatively to smaller firms. The study employed correlation analysis (Pearson product-moment correlation) and an Ordinary Least Square (OLS) regression analysis. The study found a weak positive effect of variable compensation on firm performance.

Using firm size and age, Stella, Aggrey, and Eseza (2014) studied comparative growth rate of small, medium, and large Ugandan manufacturing firms. The dynamics of firm growth is important in that the growth of firms is key ingredient in economic growth that has effect on the consequences of industrial concentration. Both descriptive and regression results showed that medium firms grow faster than the small and large firms.

In the study on top management variable pay and the financial performance of the firm in Sweden over the 2010-2014, Lindstrom and Svensson (2016) included the debt ratio as a control variable in the regression analysis model operationalized as the ratio of total debts to total assets. The authors employed the debt variable to capture possible effects of financial leverage on the performance of the firm. The control variable is used in previous research within the area (Elayan, Lau, & Meyer, 2003; Mehran, 1995).

Lindstrom and Svensson (2016) employed 900 large Swedish firms over period 2010-2014 selected from five industries including Finance, Electric utilities, IT, Retail and Health sector in line with previous researchers, Ely (1991) and Dale-Olsen (2012), to investigated the relation between the top management variable pay and the financial performance of the firm and possible industry effects on this relation. The authors included a dummy variable for each industry in the multiple regression analysis, with the Finance industry as the reference group, to allow distinguishing the industry effects on firm performance. The study reported that the relation of variable pay and performance is contingent on industry and argue that the context in which the firm operates has an impact on the investigated relation. Using data from 2010-2014, Elsayed and Elbardan (2018) employed a set of simultaneous equation modeling for 350 Stock Exchange companies to investigate the mutual association of
executive compensation and firm performance by employing board size, non-executive directors, leverage and boardroom ownership as control variables. The authors found strong evidence for the greater influence of executive compensation on firm performance than the pay-performance framework. Their findings supported the tournament theory compared with the agency theory perspective.

In their study on relationship between corporate governance practices, CEO compensation, and firm profitability of 205 U.S publicly traded large firms operating in a variety of different industries including food, chemical, and electrical industries, Robert and David (1999) reported that firms with weaker governance structures have greater agency problems in that CEOs receive greater compensation and firms record the lowest return on equity. Oyerogba, Riro, and Memba (2016) used 70 companies selected from six industries including Banking, Food and Beverages, Breweries, Healthcare, Automobile and Industrial/Domestic products listed on the Nigeria Stock Exchange to study the relation between executive compensation and firm profitability over the period of 2004-2013. The study reported a positive significant relationship between management compensation and firm profitability measure by Earnings Per Share (EPS).

3. Methodology

3.1 Conceptual Framework

The conceptual framework focuses on both the theoretical framework (interrelationship of the variables) and the empirical or analytical framework (data analysis procedures). The governing premises of the study are the agency theory (Jensen & Meckling, 1976) and the contingency theory (Donaldson, 1996; Balking & Gomez-Meija, 1987).

Figure 1 presents the interrelationship of the variables to be employed in the proposed study. The dependent variable is the firm performance measured by the earning per share ratio (EPS ratio) in line with Oyerogba, Riro, and Memba (2016). The independent variable is the management compensation measured by the log of total key management compensation. The three control variables are firm size, growth, debt ratio. The proxy for the firm size control variable is the log of total revenue. The growth control variable is operationalized by the rate of change of revenue while the proxy for the debt ratio control variable is the ratio of debt to total assets.
The popular Ordinary Least Squares (OLS) regression analysis technique is used in the data analysis. The testing hypotheses relate to the null hypothesis that the independent variable and control variables do not influence the dependent variable. The following equation represents the OLS regression model.

\[
\text{EPS}_{it} = a_0 + a_1\text{TC}_{it} + a_2\text{FS}_{it} + a_3\text{GW}_{it} + a_4\text{DR}_{it} + a_5\text{CA}_{it} + a_6\text{OM}_{it} + \epsilon_i
\]

Where:
- \(\text{EPS}_{it}\) = Earnings per share at time \(t\), proxy for firm performance (Dependent Variable)
- \(\text{TC}_{it}\) = Total compensation in time \(t\), proxy for management compensation (Independent Variable)
- \(\text{FS}_{it}\) = Firm size (control variable) in time \(t\)
- \(\text{GW}_{it}\) = Growth (control variable) in time \(t\)
- \(\text{DR}_{it}\) = Debt ratio (control variable) in time \(t\)
- \(\text{CA}_{it}\) = Construction and Allied industry in time \(t\)
- \(\text{OM}_{it}\) = Other Manufacturing (Agriculture, Automobile & Accessory, Energy & Petroleum) in time \(t\)
- \(a_{it}\) = Regression coefficients
- \(\epsilon_i\) = Random error

The study is expected to report an overall positive relationship of management compensation and firm performance in support of the agency theory and in line with the results obtained by Hall and Liebman (1998; Sigler & Porterfield, 2001; Lilling, 2006; Attaway, 2010). The three control variables (size, growth, and debt ratio) are included in the regression model in order to avoid omitted variable bias and to have more reliable result. The size control variable is included in the model because larger firms may have more potential to pay out incentives, relatively to smaller firms (Cohen, Dey, & Lys, 2013;
Gomez-Mejia, Tosi, & Hinkin, 1987; Elayan, Lau, & Meyer, 2003). The growth control variable is included since firms with a high growth rate are able to generate higher profits due to higher degree of investments (Farmer, Archbold, & Alexandrou, 2013; Fallatah, 2015; Mehran, 1995). The debt ratio control variable is included in the regression model in order to capture possible effect of financial leverage on firm performance (Elayan, Lau, & Meyer, 2003).

4. Results and Discussion
The study obtained the value of the mean of the earnings per share with two standard errors (2SE = 2.5301) of the mean implying that the value of the mean of EPS is highly statistically important indicator of financial performance of listed manufacturing firms in Kenya. This finding suggests that, more than not, investors in the manufacturing businesses can correctly compare alternative investments, project performance over time, as well as measure the net income available to shareholder.

The regression results show a positive coefficient of the key management compensation at 13.90 with p-value<0.0143. This finding indicates that key management compensation positively and statistically significantly influences financial performance. This result implies that key management compensation is an important factor that influences financial performance of listed manufacturing firms in Kenya. For instance, the finding shows that, a 5 percent increase in Kenya management compensation will lead to a 14 percent increase in financial performance of listed manufacturing firms in Kenya. There is enough evidence against the null hypothesis, and hence we reject the null hypothesis.

5. Conclusion
An important conclusion of the study is that the incentive systems of the key management compensation have a positive and significant effect on the financial performance of listed manufacturing firms in Kenya.

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