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# Comparative Effects of Pre and Post Bank Mergers and Acquisitions (M&A) on Employee Productivity in Selected Banks in Nigeria

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## Abstract

*The 2011 Mergers and Acquisitions wave in the Nigerian banking industry was triggered by the Central Bank Nigeria (CBN) in tackling operational challenges, such as poor governance, risk management, inefficient operations among others. This study investigates the comparative effects of Mergers and Acquisitions (M&As) on employee productivity in selected Nigerian banks. Many previous studies on bank M&A in Nigeria have mainly focused on post M&A profitability of the Banks, neglecting the human elements perspectives of such strategies. As a result of the observed dearth of employee productivity studies, this study aims to close this gap by examining whether or not there are differences in employee productivity pre-merger (2008 to 2010) and post-merger (2012 to 2014) of banks that pursued the M&A strategy in 2011, in response to CBN's capitalization and operational requirements. Data were extracted from the banks' annual reports and analyzed using Paired t statistic using SPSS software and Trend Analysis to measure changes in employee productivity levels pre and post-M&As. The findings of the study show an increase in employee productivity post-merger with respect to the studied parameters, namely, Advances Per Employee and Deposits Per Employee. The study thus, concludes that M&A positively impacted employee productivity in the Nigerian Banking Industry. It is recommended that financial institutions should consider the inherent implications of M&A strategy for the performance of the human elements of the entities involved, as employee productivity partly translates to overall performance of the organization.*

**Keywords:** *Employee Productivity; Mergers and Acquisitions (M&A); Nigeria.*

**JEL Classification:** *G34; L25; M38, O25.*

## Introduction

In our increasingly dynamic global business environment, M&As have emerged as one of the fastest routes/platforms for operating in new markets, attracting new resources (including human). M&A has become a veritable tool/strategy for inorganic growth that most companies have adopted both in times of boom and bust. M&A transactions are not important only to companies involved, but also to other stakeholders such as employees, competitors, communities, and the economy. As an external growth strategy, M&As incidences have increased significantly due as result of growing privatization, deregulation, liberalization, and indeed, intensifying globalization of competition.

Numerous reasons/motives have been adduced for firms' involvement in M&As. These ranges from greater market share, related or unrelated diversification, supply chain expansion, acquisition of talent/expertise, to sustainable competitive advantage, resource re-allocation. Organizational restructuring like M&A, directly or indirectly impacts an organization as a whole, in terms of the organization's systems, business operations, and its employees. (Harris & Siegel, 2005; King, et al., 2004). However, the inability of firms to develop and implement strategies in managing the impact of such change can directly portend stringent implications for the firm's profitability and by extension enhancement of its value."

The 2005 merger wave in the Nigerian banking industry was followed 2011 by another merger wave with the intent of tackling operational issues such as poor governance, risk mismanagement, inefficient operations, and strengthening of capitalization being the thrust of these new round of reforms (Ajayi, 2005). Potentially, diverse benefits of M&A such as enhancement of employee productivity, etcetera, accrue to banks (Gatheru & Were, 2014). This study, therefore, aims to investigate employee productivity of Nigeria banks that pursued the M&A strategy in 2011. There has been apparent negligence of the human capital implications of M&A and excessive focus on profitability effects by researchers.

A study of employee productivity effects of M&A is neither out of place nor strategic context because service (including banking services) cannot be separated from producer as consumption, most of the time cannot be isolated from production, they both happen simultaneously. Hence, assessing post-merger performance of service firms like banks, to an appreciable extent, is best accomplished by evaluating change in the productivity of the human elements (employees) of such organizations. Purse (2013), aptly captured the necessity of employee productivity by asserting that a firm's human capital, to a large extent determines to value and longevity of such entity. It has been observed that M&A led to attitudinal and productivity issues, including turnover of worthy personnel (Adembesa, 2014). During M&A, change can be particularly difficult, which leads to stress, having a negative impact on morale if not effectively dealt with (Kangetta & Kirai, 2017). Firms fail to become conscious of the fact that people have the ability to build or destroy the successful consummation of M&A.

## Hypotheses

$H_0$a: There is no significant difference in Advance Per Employee between the pre-merger and post-merger period in Nigeria banks.

$H_0$b: There is no significant difference in Deposits Per Employee between the pre-merger and post-merger periods in Nigeria banks.

## Brief Review of M&A Literature

### Concept of Merger and Acquisition

For some decades now, changes in the structural/regulatory environments have prompted banks across the world to expand via M&As, in the hope that strategic restructuring like M&A would usher in cost minimization, enhanced profitability, market power, economies of scale and scope, etcetera (Coccorese and Ferri, 2019). Such corporate level strategies provide important sources of competitive advantage to the merging entities (Khan, et al., 2020).

M&A as a corporate restructuring strategy exert tremendous impact the economic performance and wellbeing of the company on numerous parameters (Arocena, et al, 2019), as they play prominent roles in the rapid generation of additional market opportunities as well as synergies as regards firm size, critical competencies, value creation for the firms involved in such strategic transactions (Khan, et al., 2020), enhancement of employee productivity post-M&A also inclusive.

Sanda and Benin (2011), observe that human resource issues are important aspects of mergers which, if it is not well handled, may impact negatively on employee satisfaction with consequences for productivity and the success of the merger. Gutknecht and Keys (1993) found perceived positive change in productivity of employees following an M&A transaction. Cornett and Tehranian (1992), studied the post-acquisition performance and reported better employee productivity following mega bank mergers between 1982 and 1987.

Employee morale can be diminished by the stress and anxiety that comes with infusing two different cultures, possible job loss, undervalued feelings, betrayal, and the change in the environment. Insufficient information, unclear direction, and obscure messages, all lead to uncertainty among employees, which can be destructive (Kangetta & Kirai, 2017). Employees have the tendency to become less productive or leave during periods of uncertainty. Therefore, the human aspect of mergers and acquisitions should be given the exact importance and recognition accorded to financial, strategic and legal matters (Kangetta & Kirai, 2017)."

## Concept of Employee Productivity

Productivity is defined as the goods and services produced per unit of labor, capital or both. The ratio of output to labor and capital is a productivity measure. Literally, productivity is the output per unit of input employed." The plain definition of productivity is:

**Productivity** = Total Output/Total Input (1)

Productivity depicts how efficiently corporate resources are utilized to attain corporate objectives in terms of quantity and quality at a given period of time (Nwannebuife, 2017; Hanaysha, 2015). Kopleman, (1986) has long seen productivity as the correlation between physical output and one or more of the related tangible efforts expended during production. The success of an organization largely depends on the productivity of its human resources, (Sharma & Sharma, 2014; Cato & Gordon, 2012; Ajala, 2012)."

Sharma & Sharma, (2014) asserts that higher productivity leads to higher profitability, economic growth, and social advancement. Additionally, higher productivity leads to aggregate organizational competitive advantage and long term success (Hill et al., 2014). Essentially, the human resource is the most crucial resource among the factors of production and the human capital is the distinguishing factor between organizations (Maimuna & Rashad, 2013). Hence, for firms to attain and sustain competitive advantage, it is highly important for them to be able to attract and retain efficient and effective human resources in order to enhance productivity (Sunia, 2014). Similarly, Aluko (2016) and Mukundi, (2016) affirm that an organization is only as valuable as the human elements that manage the organization, as the employee is the most strategic of all the resources at the disposal of an organization.

Productivity may be expressed in terms of quality, time, quantity, and cost. However, Bernardin, (2007) cautioned that productivity may seem tricky to measure, though, can be expressed in terms of effectiveness and efficiency of workers. Singh & Kamlesh, (2013), also admonished that productivity as employed in the manufacturing sector cannot be employed the same way in a service industry like the banking industry where the product offerings are accounts, cheques, credit and debit cards, drafts, exchange remittances, travelers' cheques, services for guarantees, different kinds of loans, etcetera.

Measuring output in a service industry is a complex task due to the difficulty in quantifying offered services as a measure of output. Nevertheless, the concept of productivity cannot be overlooked in the banking sector, as it contributes largely to the growth of any economy. One way to assess individual productivity is to take into account how the efforts of an individual contribute to the organization's productivity or success (Ruch, 1994). Irrespective of the difficulty in measuring employee productivity in the banking industry, prior studies such as Kumar, (2016); Sommanek, (2014); Singh & Kamlesh, (2013) have been able to adopt parameters like Deposits per employee, Advances per employee, Business per employee, Total Income per employee, Total Expenditure per employee, Net Profit per employee, Spread per employee, and Burden per employee in measuring employee productivity.

## Mergers, Acquisitions and Employees

M&As can be particularly demanding from employees of an organization, in the long run leading to attitudinal and productivity issues, including employee turnover. Seldom do two cultures easily fuse into one. M&As is an extremely risky strategy, which outcomes cannot be easily foreseen. Adembesa, (2014) identified feelings of anxiety or alienation, threat to job and emergence of new competition as some of issues that may in the course of M&A. on the other hand, Goyal & Joshi, (2011) reason that acquisitions regularly impact employees' behavior negatively resulting in counterproductive practices, low morale, absenteeism, and job dissatisfaction. Kivuti (2013) claims that M&As have been linked to lowered morale, unproductive behavior, job dissatisfaction, increased turnover, and absenteeism, instead of with assumed increased financial performance. In order to reduce post-mergers and acquisitions problems, over the long run, companies must be quick to take solid steps to enhance employee commitment and retention by offering extra assistance. As a panacea, planning for the wellbeing of employees should be a vital aspect of the organization's strategy involved in any merger or acquisition (Kivuti, 2013).

Mirc (2013) studied the psychological effects of M&As on employees in terms of increased stress and anxiety, as a result of changes in environment, co-workers, decision making routines, chain of command, etc. in addition, Saraf (2017) identified four main areas M&As affect employees; the strategic fit, communication, cultural differences, and organizational structure. Kivuti (2013) investigated the effect of mergers and acquisitions in financial institutions on employee performance in terms of pay/remuneration, ownership, job security, chain of command, which are moderately influenced by M&As. Georgiades & Georgiades, (2014) in their study of the impact of an acquisition on the employees of financial institutions found that the employees of the acquired firms experienced a threat to job security, changes in social groups, and loss of familiarity and security.

Irrespective of the prominent negative effects of M&As on employees, a number of scholars identify instances in which the merger or acquisition positively impacts employees' attitude and satisfaction. M&As can, however, foster new and favorable opportunities for new tasks and career development (Buono & Bowditch, 1989; Empson, 2001); increased job security, (exceptionally in the cases where the acquisition averted possible bankruptcy); greater job satisfaction; and more diverse work tasks (Napier, 1989)."

Nevertheless, satisfied employees have been found to work harder, efficiently, and at a stretch with higher productivity reports. A direct relationship between job satisfaction and the performance of a company have been established in the M&A literature. Interestingly, Kangetta & Kirai, (2017), found that M&As positively influenced employee morale, and thus, job satisfaction. Yet, Chambers & Honeycutt, (2009); Sanda & Benin, (2011) reported that their study of the effects of M&A on employees yielded negative relationship. Aljadani and Toumi, (2019) find evidence suggesting that generally, most studies have demonstrated that M&As create productivity enhancements.

# Methodology

This study investigated the comparative effects of M&A on employee productivity in selected Nigeria banks. In the absence of specific data indicating the employee productivity with respect to the banking industry, the overall aggregate productivity was used in this research, as earlier adopted by (Kumar, 2016; Mohan, 2005; Singh & Kamlesh, 2013; Sommanek, 2014) in their respective studies of employee productivity in the banking industry, as with reference to literature that the employees of a firm contribute to its overall productivity. Therefore, the study is a matched-sample comparison of the pre- and post-M&A productivity of the four banks that pursued M&A using the Advance per Employee and Deposits per Employee as parameters. These are consistent with the parameters studied by prior scholarly efforts of Kumar, (2016); Sommanek, (2014); Singh & Kamlesh, (2013); and Mohan, (2005).

*Advance Per Employee*, extracted from the assets section in the banks' annual balance sheets, is derived by dividing the total amount of bank advances by the total number of employees for the year. Bank advances, also denoted as bank loans are the given sum of money an individual or business borrows from a banking institution. It is a type of credit which is spread out for an agreed period of time, commonly on fixed interest periods in terms of the interest rate with the principal repaid either in installments or completely at an appointed date (Pass, 2005).

*Deposits Per Employee*, extracted from the assets section in the banks' annual balance sheets, is derived by dividing the total amount of bank deposits by the total number of employees for the year. Deposits are the money individuals or businesses put into their respective bank accounts for safekeeping. They are liabilities the banking institutions owe to the depositors (Kagan, 2018).

The independent variables are the M&As that took place in the selected four banks under study. The dependent variables are the productivity metrics, namely, Advance per Employee and Deposits per Employee. The study examined six financial years of banks that engaged in M&A, starting from 2008 to 2014, three years before M&A (2008, 2009, 2010) and after M&A (2012, 2013, 2014), with the year of consummation being 2011 (refer to Appendix). Data for the study was obtained from secondary sources, namely, the audited annual financial reports of the four banks examined. Out of the 24 banks operating in Nigeria as of 2011, four banks pursued the M&A strategy as follows: Access Bank acquired/merged with Intercontinental Bank, Ecobank acquired/merged with Oceanic Bank, First City Monument Bank acquired/merged with First Inland Bank, and Sterling Bank acquired/merged with Equatorial Trust Bank. Included in this study are Nigeria banks that pursued the M&A strategy in 2011.

## t-statistic

The *t-statistic* was performed to investigate change in employee productivity parameters (Advance per Employee and Deposits per Employee). Specifically, the t-statistic was employed to depict the mean difference of each parameter of employee productivity between the pre-merger and post-merger periods, using the Statistical Package for the Social Sciences (SPSS) software. The paired samples t-test was particularly used tests a sample group (Employee productivity) at two different periods (pre and post-merger), or two observations that are related, that is, two observations per subject (Stephanie, 2014). This choice of data analysis technique is justified by the prior studies of Nachmias et al, (2015); Caves, (1989); Bruner, (2001), respectively stating that the t-test is theoretically well-grounded, easy and cheap to execute and boasts the ability to eliminate the plagues of constantly holding other factors in previous studies regarding the effects of M&A. Bruner, (2001), justifies that the t-statistics reveals the probability that the findings were as a result of chance, i.e., the more increase in the t value, the less probability of a chance occurrence."

## Trend Analysis

Trend Analysis was also performed to assess change in employee productivity metrics (Advance per Employee and Deposits per Employee) following the involvement of these selected banks in M&A. The trend analysis was computed to show the trend in the level of employee productivity across the years studied with respect to the parameter of employee productivity, using the Microsoft Excel software. A trend is an ascending or descending change in a data set across time (Chandler et., al, 2011).

## Data

The data was obtained for three years (2008 to 2010) from the acquirers and their respective targets and three years (2012 to 2014) for only the acquirers as the target banks ceased to exist after the year of consummation, 2011. The mean accounting ratios of three years before the year of consummation were calculated for both the acquirers and their respective target banks. t-statistics, percentage change, and trend analysis were performed on the data gathered for employee productivity for each of the 4 selected banks, using the aforementioned parameters (Advances Per Employee, and Deposits per employee). The data analyzed for the pre-merger period was derived by finding the mean of each parameter from the year 2008 to 2010 of the acquiring and target firms, while the post-merger data of each parameter was used directly from 2012 to 2014.

# Results and Discussions

### - t-Statistics Analysis

To test the hypothesis, paired sample t-statistic was performed to measure the mean difference of each productivity metric between the pre-merger and post-merger periods, with decision rule: reject null hypothesis if $P < \alpha$, accept null hypothesis $P > \alpha$. For the purpose of this study, $\alpha$ is set at .05 for data analysis.

**Hypothesis 1:**

H0a: There is no significant difference in Advances Per Employee between the pre- merger and post- merger periods.

**Table 1.** Advances per Employee 1. 20Paired Samples Statistics

| | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| APEPE | 72943.42 | 12 | 51837.227 | 14964.118 |
| APEPO | 162326.50 | 12 | 87619.123 | 25293.462 |

**Table 2.** Advances per Employee 2. Paired Samples Test

| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair 1 APEPE - APEPO | -89383.083 | 48562.334 | 14018.738 | -120238.118 | -58528.048 | -6.376 | 11 | .000 |

Table 2 shows the mean difference of Advances Per Employee for the pre-merger period (APEPE) and Advances Per Employee for the post-merger period (APEPO). Here, the P-value (.000) is less than the alpha (.05), therefore we will reject the null hypothesis. In simple terms, there is a significant difference between APEPE and APEPO. Also, from the means in Table 1, APEPO (162326.50) is higher than APEPE (72943.42) with a difference of 89383 as shown in Table 1.1.

**Hypothesis 2:**

There is no significant difference in Deposit Per Employee between the pre-merger and post-merger period.

**Table 3.** Deposit per Employee 1. Paired Samples Statistics

| | | Mean | N | Std. Deviation | td. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | DPEPE | 111496.58 | 12 | 35546.326 | 10261.340 |
| | DPEPO | 256998.42 | 12 | 123169.750 | 35556.044 |

**Table 4.** Deposit per Employee 2. Paired Samples Test

| | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair 1 DPEPE – DPEPO | -145501.833 | 105579.752 | 30478.249 | -212584.007 | -78419.659 | -4.774 | 11 | .001 |

Table 4 shows the mean difference between Deposits Per Employee during the pre-merger period (DPEPE) and Deposits Per Employee during the post-merger period (DPEPO). Here the P value (.001) is less than the alpha (.05), therefore we reject our null hypothesis. This indicates, there is a significant difference between DPEPE and DPEPO. From the mean in Table 2, DPEPO (256998.42) is higher than DPEPE (111496.58), with a difference of 145501.8.

**Discussions**

***t*-Test**

From the *t*-test analysis, the two hypotheses were rejected because their p-values of each respective parameter of employee productivity were less than the significant level (.05). Therefore, there is a significant difference between bank M&A before and after the year of consummation on employee productivity in terms of Advances Per Employee and Deposits Per Employee. The mean of Employee Productivity with respect to the two parameters during the post-merger period were enhanced compared with the Employee Productivity during the pre-merger periods, refer to *(Tables 1, and 2)*. This suggests that Employee Productivity with respect to the metrics saw improvements during the post-merger period for the banks.

## Trend Analysis

A trend analysis of each employee productivity ratio was computed to graphically show the trend of each parameter over the years from 2008 to 2014. It showed the pre-merger performance trend (2008-2010), post-merger performance trend (2012-2014) and the overall M&A performance trend (2008-2014) for each of the employee productivity parameter. The aggregate trend of mean Advance Per Employee for the banks highlight an upward slope, depicting an increase in the level of employee productivity during the pre-merger period (2008-2010), post-merger period (2012-2014) and also across the six years studied (2008-2014), (refer to Appendix 1). This shows that M&A influenced Advance Per Employee positively. The aggregate trend of mean Deposit Per Employee for the banks depicts an upward slope too, suggesting an improvement in the level of employee productivity during the pre-merger period (2008-2010), post-merger period (2012-2014), and across the six years studied (2008-2014), (refer to Appendix 2). This shows that M&A also influenced Deposit Per Employee positively.

Our findings show that the employees of the banks pursuing the M&A strategy were able to increase their level of productivity, although at different rates compared to the pre-merger period when they were operating alone. These findings are consistent with those of prior studies such as Buono & Bowditch, (1989); Napier, (1989); Empson, (2001); Rusu, Miettinen, & Varjonen, (2006), Kangetta & Kirai, (2017). They all obtained evidences that suggest that bank M&As have positive implications for Employee Productivity, namely Advance Per Employee and Deposit Per Employee.

## Conclusion and Implications

The study set out to investigates the comparative effects of Mergers and Acquisitions (M&As) on employee productivity in selected Nigerian banks. From the research findings, it is therefore concluded that M&A positively influences Employee Productivity of Nigeria banks. Based on the findings of this study, M&A positively impacted Employee Productivity, hence, confirming the assumption that employees of a firm are key elements in the overall wellbeing or success of an organization.

The key managerial implication of this study largely affirmed the contribution of employees to the overall performance of bank after M&A. Firstly, the finding explicates that fact that the total amount of bank advances (bank loans of different forms) to investors, businesses and other loan seekers in the banking system is largely dependent on the efforts of bank employees through intensive marketing, publicity, customer relationship management and other human relations skills. Furthermore, the study underscored that fact that total amount of bank deposits (savings, current and fixed deposits) made by individual customers and corporate businesses is largely dependent on the efforts of bank employees through intensive marketing, publicity, customer relationship management and other human relations skills. Therefore, the Nigerian banks should give optimal attention to the human elements their corporate strategies, as empirical findings affiremd that employee productivity largely contribute to overall performance of the organization.

## Recommendations

From our findings, this study can be used as a guide by firms to keep improving their employees level of productivity, especially for those that plan to or have already engaged in M&A as a growth strategy; as a means of adapting to economic and environmental changes; or a means of creating value. Whichever the motive is for pursuing the M&A strategy, it is of great importance that the human elements of the organizations are considered before, during and after the year of consummation, and not neglected.

In addition, the findings of this research indicates an increase in employee productivity within three years of engaging in M&A, however, M&A strategy can be adopted as a go-to strategy to enhance the performances of firms with fewer resources within a short period of time, instead of growing organically and deploying more resources to grow over a longer period of time.

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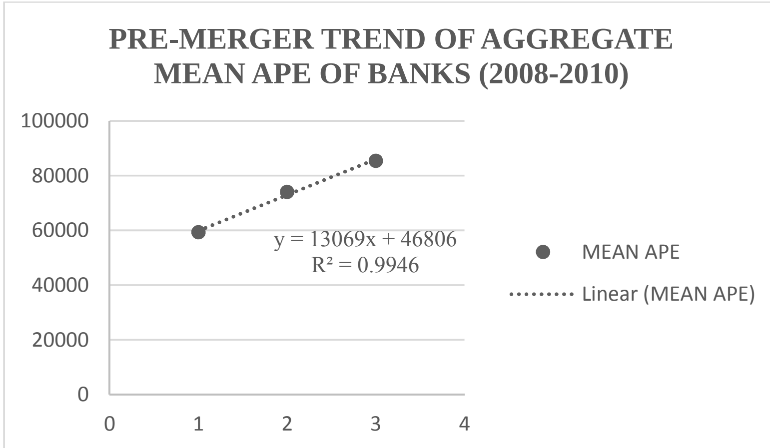
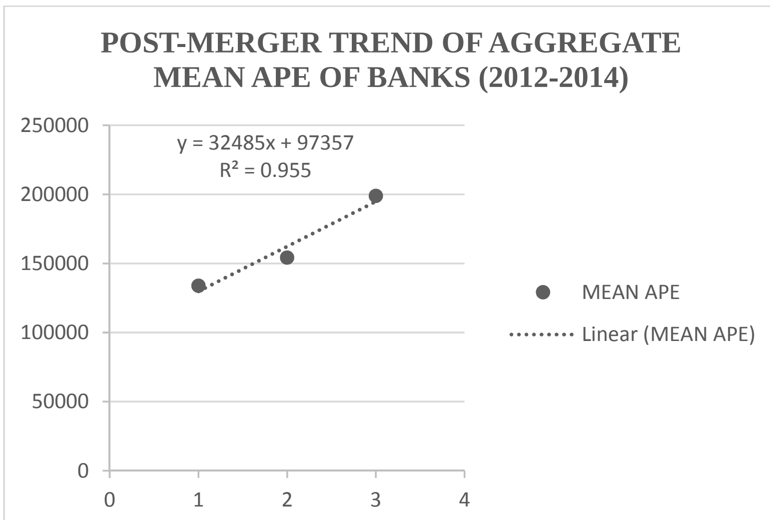
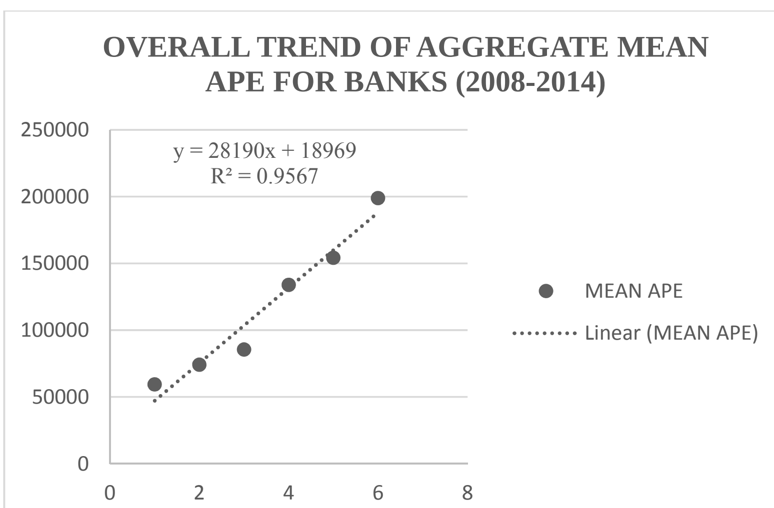
**Appendix 1: Trend Analyses of Advance Per Employee**



**Appendix 2: Trend Analyses of Deposit Per Employee**