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IMPLICATIONS OF DIFFERENTIAL AGE DISTRIBUTION OF WORKERS IN PUBLIC  
AND PRIVATE EDUCATIONAL SECTORS IN NIGERIA: A COMPARATIVE  
PERSPECTIVE

BY

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**Abstract:** This work was aimed at ascertaining the implications of differential age distribution of workers in the public and private educational institutions in Nigeria, by specifically finding out which sector has more aging workforce; and the relationship between aging and performance. The work was explorative in nature and cross-sectional survey design was adopted. The main instrument used for data collection was the questionnaire. Data collected were presented and subjected to statistical analysis using Spearman's Rank Correlation (rs) while applying the Statistical Package for Social Sciences (SPSS). One hypothesis was formulated in order to test the identified variable. The research found that the public educational sector has a more aging workforce than the private educational sector' and thus with a more energetic workforce, productivity is higher in the private educational sector. The study recommended that the public educational sector should emulate the private sector in sourcing for younger workforce with

more energy and technology compliance; and that the public educational institutions should reserve about 70 percent of its workforce strength to younger workers who are more flexible, faster, and tend to work longer hours.

**Keywords:** Public sector, Private sector, Age Distribution, Performance, Workforce, Younger Workers, Older workers.

I INTRODUCTION:

Securing and hiring capable and quality staff is a constant challenge facing many organizations whether in the private or public sector. Many organizations find it more difficult to compete for talents and as a result, may hire new staff quickly just to have somebody fill a position. This often leads to the expensive consequences of a bad hire, poor performance and decreased

morale. One of the very important factors that is usually considered in hiring, is age.

Age is an important factor in employment, and therefore, reflects directly and indirectly on employment policies in both public and private establishments. Age is so important because strength, energy and robustness affect the character of a human resource management system.

The relationship between aging and performance in employment issues has received little attention by scholars. Concentration has been on the consequences of aging population in terms of dependency rates and rising security costs (Guber and Wise, 2004). Little or nothing has been said about (i) which age bracket is more productive than the other; and (ii) which sector, public or private, has more aging workforce and the resultant implications on performance and/or productivity.

At a time when unemployment rates are high, organizations are very selective about whom to hire. Older workers do not make the top of the list to potential job seekers in some establishments, whereas, in some others, experience is what matters most. Some scholars like Yearta (1995) believe that age has nothing to do with work performance; whereas others like Smedly and Whitten (2006) and Schultz and Adam (2007) all agreed that difference of age could be a potential factor for work performance.

It is against this backdrop that the author's interest was aroused to examine the implications of differential age brackets of workers in both public and private

educational sectors. Two establishments in the same industry were studied for this purpose. Our Saviour Institute of Science, Agriculture and Technology (OSISATECH), Enugu, Nigeria, a leading private Polytechnic, in Nigeria, representing the private sector, and Akanu Ibiam Federal Polytechnic, Unwana, Nigeria, a government owned Polytechnic, representing the public sector, was chosen for this study. The choice of these two institutions is considered apt because they are seen as good representations of the two sectors, more so, when they are of the same industry.

## I. OBJECTIVES OF THE STUDY

The major objective of the study is to determine the implications of differential age distribution of workers in Nigerian public and private sectors – with special emphasis on educational institutions. The specific objectives are:

- (a). to ascertain which of the two sectors under study has more aging workforce;
- (b) to find out the specific implications of having either older or younger workforce;
- © to find out the relationship between aging and performance.

## II. METHODOLOGY

### A. Research Design:

The work is explorative in nature because it is conducted for a problem which other researchers have not clearly defined. Also cross-sectional survey design is

adopted for the work. As a result of this explorative and cross-sectional nature, the work is designed to find out more facts concerning the implications of age differentials in both public and private educational sector in Nigeria.

#### B. Population of the Study:

The population of the study is made up of all the employees of Akanu Ibiam Federal Polytechnic, Unwana (representing public sector) totaling 1,995 staff; and the 126 staff of Our Saviour Institute of Science Agriculture and Technology, Enugu.

#### C. Sampling Size and Sampling Technique:

Two types of sampling techniques were adopted for the study. First, Taro Yamane's (1964) formular for sample size determination was used to determine the sample size for

Akanu Ibiam Federal Polytechnic, Unwana. This is because of the large size of the population, and more so the population of the institution is definite and known. Second, Purposive Sampling Technique was used to determine the sample size of Our Saviour Institute of Science Agriculture and Technology, (OSISATECH), Enugu, because of the small size of the population. Purposive Sampling Technique is the type that adopts the entire population as a sample for study. Consequently, the entire population of OSISATECH is adopted as the sample size. Therefore, the sample size for

OSISATECH remains 126, while that of Akanu Ibiam Federal Polytechnic, Unwana, is rounded up to 400, calculated based on Taro Yamane's formular for sample size determination for estimating proportion in a finite population. However, of the 400 and 126 copies of questionnaire distributed to staffers of Akanu Ibiam Federal Polytechnic, Unwana (AIFPU) and Our Saviour Institute of Science Agriculture and Technology (OSISATECH) , only 315 and 95 respectively were retrieved and used for analysis.

#### D. Method of Data Collection:

The method used in collecting data for this research is the questionnaire. Questionnaires were administered to the sampled populations. Two sets of questionnaire prepared and administered to the respondents. One set for management staff of both organizations and another set for non-management staff of both organizations. In other words, same questions were asked all the respondents in the same category.

#### E. Hypothesis:

The hypothesis formulated for the study is stated thus:

Ho: There is no significant difference in the age distribution of workers employed in public educational institutions and private educational institutions which has corresponding effects on performance.

H1: There is significant difference in the age distribution of workers employed in public educational institutions and private educational institutions which has corresponding effects on performance.

Scholars like Kunze, Boehm and Bruch (2011) have been able to identify possible job performance differences for older and younger workers. According to them, performance of (older workers) may decline in jobs where certain skills (like psychomotor skills) are needed. Also, performance may decline where executive functions are needed (such as monitoring information), and in addition, learning may decline. However, years of work experience and wisdom are likely to compensate for these possible declines.

#### IV: THEORITICAL AND EMPIRICAL REVIEWS:.

##### A. Age and Job Performance:

In a meta-analysis of actual job performance differences, Ng and Feldman (2008) got the following results:

<b>Activity:</b>	<b>Result:</b>
Core task performance	Age was generally unrelated to core task Performance
Creativity	Age was generally unrelated
Performance in training programme	Older workers performed very slightly lower
Organisational citizenship behavior	Older workers were slightly more likely to help other employees, the organization, etc.
Safety measures	Older workers were likely to comply with Safety rules, and are more likely to Experience less work injuries
Counter-productive work behaviour	Older workers were less likely to participate in counter productive work behavior
Aggression	Older workers less likely to be aggressive
Substance Abuse	Older workers likely to participate in substance abuse

Tardiness	Older workers much likely to be tardy
Absenteeism	Older workers much less likely absent, but slightly more likely to have sickness related absences.

(Tabulated by the Researcher).

However, contrary to widespread assumption by many scholars, Campian (2011) argues that industrial and organizational psychologists, who have extensively researched age stereotypes in the workplace, have shown many studies indicating that job performance does not decline with age. According to him, older workers have a lot going for them to make them desirable to retain on the workforce. "For example, because of their experience, older workers tend to find more efficient ways of performing their jobs..."

Agreeing with this, McEvoy and Casicio (1989), Salhouse and Maurer (1996) and War (1999) affirmed that there is no observable relationship between age and job performance. These researchers advanced reasons why there is no identifiable relationship between age and job performance. First, using job performance as a measure, they argue that people who are not performing well do not stay on the job till old age. They either quit or are quitted. Secondly, there may be non equivalent responsibilities between people within the same job. In other words, persons with the same job title may not have the same duties or responsibilities, therefore making meaningful comparisons of the job performance of older and younger workers difficult. Thirdly, job performance measures

often relay supervisory ratings which are imperfect measures of performance. In addition, many jobs declining abilities can be compensated for by other factors, such as more experience, more knowledge, taking more time to complete demanding duties, etc. Furthermore, job experience usually leads to more job knowledge (Schenidt, Hunter and Outerbridge, 1986). Someone who has been around longer will acquire more job knowledge that is relevant to the task(s) at hand. White (2012), outline low turnover rates, high levels of engagements and higher skills levels as benefits for hiring older workers. Similarly, according to Bastien (2006) there are 12 identifiable benefits of hiring older workers. These are (i) dedication, (ii) punctuality, (iii) honesty, (iv) detail-oriented, focused and attentive, (v) good listening (vi) pride in a job well done (vii) organizational skills, (viii) efficiency and confidence (ix) maturity (x) setting an example (xi) communication skills, and (xii) reduced labour costs.

However, despite all these benefits identified by various scholars, it is also observed that because of quest for profits and efficiency, the private sector, prefer hiring of younger workers who generally (i) attract lower wage bill compared to older workers and (ii) are more energetic and thus can be exploited to put in more efforts.

Baltes and Finkelstein (2011) agreed that issues bordering on age and performance have broad implications for the study of organizational behavior, ranging from recruitment, through retention, and focusing on such central concerns to the field as motivation, engagement, climate, employee development, occupational health, and performance.

Adams (2012) cited two conflicting studies. In the first one, she reported a survey of 1,500 hiring managers, of which only one percent of respondents said it is easiest to place job seekers in their 50s, as opposed to younger workers in their 20s, 30s and 40s. In the second survey, she quoted a giant Switzerland based human resources consulting firms, ADECO, as having ran a survey of 500 hiring managers that found that respondents said they were three times as likely to hire a mature worker, defined as age 50 or above (60 percent), as they were to hire a millennial (20 percent). Millennial is defined as those born just before the millennium from 1981 through 2000. The study also indicates that hiring managers associate mature workers with being reliable and professional.

However, the study asserts that younger workers are more creative and better “networkers”, and technologically better equipped. Denny (2010) agreed with this, when he said that many younger people are better when it comes to getting the job done than older ones. He points out that the younger workers are able to find information faster than the older workers, who are not that familiar with how the internet works. They can download data faster and install

software quicker than older workers. Denny (2010) went ahead to cite a Stanford University study, which shows that younger people can write and communicate better than older ones, simply because they have been doing it since they were children. The study says that texting messages and staying online most of the time improves communication skills.

Thus, the younger generation is more mobile and flexible when it comes to changing jobs. They can adapt more easily to changing world and take on jobs that do not depend on experience alone.

A study by Yeara (1995) indicates that age has nothing to do with work performance. This is at variance with the works of Smedley and Whitten (2006) and Schultz and Adam (2007) who all agreed that difference of age could be a potential factor for work performance. In addition, Kujala, RemesTannelin and Laitinen (2005) emphasized that younger people are poor on work performance, but this is opposed to the opinions of Birren and Schaie (2011) who offered that younger workers have more energy and fresh current ideas.

Aging workforce is reflected in the demographics of most organizations whether public or private. It creates problems for all kinds of organizations. Globally, it has been found that, as a group, public sector employees are older than most private sector workforce. For instance, in a study of eleven North American and European countries, by the Organization for Economic Cooperation and Development, it was found that 25 percent of national government employees are older than 50, the average age of the

public sector workforce surpasses that of private sector workforce in most developed countries (Accenture, 2013). In the United States of America, for example, 53.39 percent of the employees in the executive branch of government were older than 50 years in 2002 (KM Magazine, 2004). In Netherland, more than 60 percent of employees have more than 20 percent of employees aged 50 to 64 (“Managing an Aging Workforce and a Tight Labour Market: Views Held by Dutch Employers” quoted in Accenture, 2013). In the Australian State of New South Wales, 42 percent of public sector employees are over 45 years of old, as against 32 percent of private sector employees. Also, only 5 percent of the public sector employees are under 25 years of age compared to 18 percent of private sector employees (The Economist, 2003). In the United Kingdom, 27 percent of the public sector workforce is 50 or older, compared with 21 percent in the private sector. Furthermore, 29 percent of public sector workers are in their 40s, compared with 21 percent in the private sector. In addition, just 16 percent of workers in the public sector are under 30 years, compared to 31 percent in the private sector (Economist, 2003)

There is no doubt that most employment policies reflect the age bracket and educational attainment of the employees they intend to hire. Studies have been carried out in order to ascertain which sector – public or private employs younger and more educated workforce. For instance, Greenfield (2007), citing a recent United States census data, observed that 45.3 percent of the civilian labour force (in the

U.S) is between 40 and 61 years of age. However, the proportion of the workers of the same age in the public sector is substantially greater. According to the study, among Federal workers, 64.1 percent of the workforce is within this age group, while 54.3 percent of these are in the State Governments workforce and 57.2 percent of local government workers are within this group. The implication of this is that with the aging of the population, all employers will need to replace a growing number of retiring workers. According to the statistics released by the U.S. Bureau of Census (2006), the population of workers age 40 and above is substantially greater in the public sector than in the private sector. 48 percent of private sector workers were over 40 years of age, while 69.0 percent of the Federal workforce was over 40. The percentages for State and Local Governments were 60.0 percent and 63.5 percent respectively (U.S. Bureau of Census, 2006). In other words, the private sector in the United States has a greater proportion of younger and energetic workers. While more than 29 percent of the workers in the private sector were under 30 years of age, the comparable rate in the Federal, State and Local sectors were 11.6 percent, 19.2 percent and 14.5 percent respectively.

From all that have been reviewed above, with regards to aging and work performance, we can infer that in general, studies have shown that older workers exhibit lower turnover, more dedication to the workplace, and have more positive work values. Secondly, studies have not shown there is any consistent relationship between aging and performance at work. The main

identifiable reasons for poor performance are lack of recognition and feeling as if their work is not valued; not getting along with supervisors; high job stress; and lack of support. All these situations can occur at any age.

Some scholars considered above noted that older workers work slower and can't easily make quick decisions. However, this change can be considered balanced, because older workers often tend to be more

accurate in their work and make more correct decisions than faster younger workers.

It is generally agreed that younger workers are more flexible, tend to work longer hours, think somewhat faster, and bring in new ideas. On the other hand, older workers have lots of experience, they have gone through the mistakes, learned from them, and used them to work out better solutions.

A. Findings:

In the questionnaire administered, efforts were made to ascertain the present age brackets of the workforce of the two institutions under study and the age bracket when they assume duty:

TABLE 1: Present Age Bracket of Respondents

V.FINDINGS/TEST OF HYPOTHESIS

OPTION	AIFPU	%	OSISATECH	%
30 – 35	8	2.54	39	41.05
36 – 41	86	27.30	42	44.21
42 – 47	96	30.48	7	7.37
48 - 53	125	39.68	7	7.37
TOTAL	315	100	95	100

Source: Fieldwork 2014.



2.41 percent of the respondents in Akanu Ibiam Federal Polytechnic, Unwana fall within 30 – 35 years as against 41.05 percent in Our Saviour Institute of Science, Agriculture and Technology, Enugu; 27.30 percent of respondents in Akanu Ibiam Federal Polytechnic, Unwana fall within the age bracket of 36 – 41 as against 44.21 percent in Our Saviour Institute, Enugu.

The implication of table 1 above is that the public educational institution sector has more aging workforce than the private

educational institution sector. With over 40 percent and 44 percent of the workforce in the private sector being less than 41 years age and more than 39 percent in the public sector aged between 48 and above 50, definitely the private sector has more energetic workforce.

TABLE 2: Age Bracket of Respondents When they Assumed Duty.

OPTION	AIFPU	%	OSISATECH	%
20 – 25	47	14.92	31	32.63
26 – 31	73	23.17	46	48.42
32 – 37	78	24.76	11	11.58
38 - 43	117	37.14	7	7.39
Total	315	100	95	100

Fieldwork, 2014

14.92 percent of the respondents from Akanu Ibiam Federal Polytechnic, Unwana fall within the age bracket of 20 and 25 when they assumed duty in the institution; 32.63 percent of the respondents from Our Saviour Institute of Science, Agriculture and Technology, Enugu fall within that age bracket at assumption of duty. 23.17 percent of the Akanu Ibiam Federal Polytechnic, Unwana respondents falls within the age bracket of 26 and 31, as against 48.42 percent of Our Saviour Institute of Science and Technology, Enugu respondents.

Therefore, private educational institution employs younger workforce than the public educational institution as evident in the table 8 above. Only about 7.39 percent of the private sector workforce attained the age of 38 and above at the point of entry into service. Conversely, more than 37 percent of the public sector workers were employed when they were 38 years of age and above. This collaborates the findings on Table 1.

B. Test of Hypothesis:

Ho: There is no significant difference in the age distribution of workers employed

in public educational institutions and private educational institutions which has

corresponding effects on performance.

H1: There is a significant relationship in the age distribution of workers employed

in public educational institutions and private educational institutions which has

corresponding effects on performance.

To test the hypothesis, data on Table 2 were subjected to SPSS analysis

Level of significance:  $\alpha = 0.05$ .

Analysis:

Table 3: Descriptive Statistics for hypothesis

	Mean	Std. Deviation	N
AIFPU 3	78.7500	28.89492	4
OSISATECH	13.7500	18.17278	4

Table 4: Spearman's rho correlation for (SPSS Output )

	AIFPU	OSISATEC
Spearman's rho	1.000	-.800
AIFPU Correlation Coefficient		
Sig. (2- tailed)		.200
N	4	4

TEST STATISTIC: The Spearman rank correlation was used

$$r = 1 - \frac{6 \sum d^2}{n(n^2-1)},$$

Then, the hypothesis is validated with T-distribution, given as

$$t_{cal} = r \sqrt{\frac{n-2}{1-r^2}}, \dots\dots\dots \text{for}$$

manual method

both manual method and SPSS analysis was adopted to validate the hypothesis.

REJECTION RULE: Reject  $H_0$  if  $t_{cal} > t_{Tab}$ , otherwise accept .....(manual method)

OSISATECH Correlation Coefficient	- .800
Sig. (2-tailed)	.200
N	4

Source: Table 2

Table 5: Spearman’s rho correlation for Hypothesis (Manual)

	AIFPU	OSISATECH	RAIFPU	ROSIATECH	d	d <sup>2</sup>
1	47	31	4	2	-2	4
2	73	46	3	1	-2	4
3	78	11	2	3	1	1
4	117	7	1	4	3	9
Total						18

Source: Table 2.

$$r = 1 - \frac{6\sum d^2}{n(n^2 - 1)} = 1 - \frac{6(18)}{4(4^2 - 1)} = 1 - \frac{108}{60} = 1 - 1.8 = 0.8$$

$$t_{cal} = r \frac{\sqrt{n-2}}{1 - r^2} = 0.8 \frac{\sqrt{4-2}}{1 + 0.8^2} = 0.8 \frac{\sqrt{2}}{1.36} = 0.8 \times 1.104 = -0.883$$

$$t_{cal} = -0.883; t_{Tab} = t_{0.025, 2} = 2.123$$

Reject  $H_0$  if  $t < -t_{\alpha/2, v}$  or if  $t > t_{\alpha/2, v}$

Therefore,  $t_{cal} = -0.883$

From the SPSS output above, mean for AIFPU is 78.75 and OSISATECH is 23.75, Standard deviation stood at 48.89 and 18.17. While the value of  $r = -0.8$ , indicates a very strong negative correlation between the age distribution of workers employed in public educational institution and private educational institution which has corresponding effect on their performance.

$t_{cal}$  was computed to be  $= -0.883$

The critical value for  $t$  at alpha level of 0.05 was read from  $t$ -table as  $-2.123$ .

Conclusion: Since  $t_{cal} = -0.883$  is greater than  $t_{Tab} = -2.123$ , there is sufficient evidence to reject  $H_0$ . Based on the data before us, we conclude that there is significant difference in the age distribution of workers employed in public educational institution and private educational institution which has corresponding effect on their performance.

## VI. CONCLUSION

From the findings, it is evidently clear that there is a significant difference in the age distribution of workers employed in the public and private sectors which has implications for performance. The research found that public educational institutions have more aging workforce than the private educational institutions which invariably means that the private schools have more youthful and energetic workforce. With more energetic workers, it is expected that all things being equal, productivity should

be higher in the private institutions. A lot of inferences can be made from this. One, that one factor that accounts for higher performance noticed in the private institutions is that it has more energetic workforce that can afford to put in more hours of service when compared to what is obtainable in the public educational sector. Secondly, we can also infer that the public sector is more likely to have job openings (vacancies) than the private sector because of a growing number of old workers who are retiring and even dying.

## VII. RECOMMENDATIONS

It is recommended that the public educational sector should emulate the private sector in sourcing for younger workforce with more energy and technology compliance.

Secondly, since it has been established that younger workers are more flexible, tend to work longer hours, think faster, etc. public educational institutions should reserve about 70 percent of their workforce strength to that category.

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