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The Relationship Between Aptitude Test Score And Sales Personnel's Performance

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Abstract

The purpose of the study is to assess and predict the relationship between aptitude test score and sales personnel's performance. The target population comprised of sales personnel's of both sexes between the ages of 21 and 40 who have worked for a minimum of 2 years in the banking industry and in the Greater Accra Region of Ghana. Data were gathered on job applicants who took the aptitude test and were hired between January of 2008 and December of 2009. The findings revealed that, there is a significant positive relationship between aptitude test score and sales personnel performance whiles there is a negative relationship between age and aptitude test score. The study suggests that the aptitude test should be improved to measure the knowledge and skill required by banks, or discarded as a medium of selecting sales personnel's.

Key words: **aptitude test score**; **sales personnel's performance**; age; training

Introduction

The use of aptitude and knowledge test to screen potential job applicants has long been standard practice across many different sectors in Ghana. This has become an important and integral part of the overall interview process. Aptitude test affords companies an opportunity to make a more informed decision when it comes to hiring. The test assess many factors which are very important of being able to make comparisons which cannot be underestimated. The test assesses many factors which are very important in terms of choosing the right candidate. They can assess an applicant's ability to problem **s**olving, reasoning, write coherently and get along with others (Georgina, 2014).

According to Schmidt, (2002) aptitude test score gives accurate picture of candidate's ability to excel in their chosen profession. Different aptitude test measures different qualities**,** however it gives the employer valuable information that face to face interview cannot unearth. Notwithstanding that, aptitude test design must be congruent with the vacancy in mind to ensure that the skills and knowledge

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tested is relevant to the position; otherwise the result will be wholly inaccurate.

The greatest challenge is whether applicants that excel well in aptitude test score would perform creditably when employed is a matter of concede. There have been many schools of thought explaining the correlation between aptitude test score and sales force performance. Due to the complex nature of the relationship that exist between the two, continuous research exercise should be carried out, hence the present research effort.

Reviewed literature

An aptitude test is designed to evaluate employee's potential and predicting a person's ability to perform at work. It also measures employee's level of competency to perform a certain type of task (Cherry, 2002). According to Gatewood and Field, (2001) aptitude test includes measures of verbal, mathematical, memory, and reasoning abilities). Aptitude tests prove to be a single most effective predictor of job performance across all job types (Schmidt and Hunter 2004).

Although aptitude testing is estimated to predict performance in many jobs (Gatewood and Field, 2001), there has been controversy over the widespread use of these tests for selection. Some of the controversy focuses on ability tests used as the sole basis for hiring decisions and the potential for excluding historically low scoring groups (Cronin, and Tam, 2003) which are most frequently racial or ethnic minorities. This will lead to adverse effect, unfairness in hiring that occurs when members of a subgroup are selected disproportionately less frequently than members of another group (Robertson and Smith, 2001).

A study conducted by Viswesvaran and Ones, (2002) indicated that there is a positive significant relationship between aptitude tests score and sales personnel's performance, besides Schmidt and Hunter (2004) found a significant correlation between general mental ability and performance at job ranged. However research conducted by (Robertson and Smith, 2001) revealed that aptitude testing causing adverse impact sales personnel's performance. This led to the first hypothesis. There is a positive significant relationship between aptitude tests score and sales personnel's performance. This led to the first hypothesis:

H1; there is a positive relationship between aptitude score and sales personnel performance.

Sslas and Cannon- Bowers (2001) argued that training is significant in organization as it helps employee keep pace to the constant changes in the environment. As one published work of Mumford, Weeks, Harding and Fleishman (1988) insisted that aptitude test score predicts training grade. The study of Hunter (1989) explained that training performance as a dependent variable on aptitude test. Salgado et al (2003) found that training validities increase from low to high based on aptitude score. Hausdorf and Girard (2013) also concluded there is a positive relationship between aptitude score and training performance. Aptitude test scores relates positively with performance in training courses (Schmidt & Hunter, 2004)

Brown, HuyLe and Schmidt (2006) explained that each individual have personal strength with regards to mental abilities, therefore combination of many factors leads to training performance. Aptitude score single handedly cannot influence training performance. This has led to the second hypothesis

H2; there is a positive relationship between aptitude score and sales personnel performance.

Previous research by (Viswesvaran and Ones, 2002) indicated that there is a positive significant relationship between aptitude tests score and job performance, this outcome is expected to be consistent for a long term measure of job performance. Besides Schmidt and Hunter (2004) found a significant correlation between general mental ability and performance at job ranged from .31 to .73. They also found that validity coefficients between cognitive ability and job performance were strongest for jobs high in complexity. Besides research conducted by Robertson and Smith, (2001) revealed that aptitude testing causing adverse impact on job performance. This led to the third hypothesis.

H3 there is a significant relationship between age and aptitude test score.

Methodology

The methodology assumed for this study is scientific as the process is systematic, methodological, rigorous, conventional and unbiased. This is to ensure the gathering of relevant and reliable data and the application of appropriate statistical techniques in the analysis of the data in order to control potential statistical errors and thereby arrive at accurate conclusions.

The study employs secondary data derived basically through the archival data from 146 current and past employees who completed an

aptitude test as part of the employment selection process in the banking industry.

Data collection

Data were gathered for job applicants who took the aptitude test and were hired between January of 2008 and December of 2009 and employed into sales and marketing department. These archival data were collected between 2012 and 2013. The aptitude test was administered during the application process of employment. The aptitude test lasted for 60 minutes, test consists of three parts: a series of matrix manipulations, number series completion, and mathematical problem solving questions.) Each subtest contains multiple choice questions with five answer options. For the matrix manipulations, test takers have 20 minutes to answer 30 items.

For the number series completion, test takers have 20 minutes to answer 40 items. For mathematical problem solving, have 20 minutes to answer 25 items.

Data analysis

Results

Following the guidelines indicated in the research methodology section, we collected data during the period

Participants

Table 1: Sample of Respondents

Variable	Number	Percentages
Gender		
Female	47	32.2%
Male	99	67.8%
Age		
21 - 26	87	59.5%
27-32	58	39.7%
33- 38	1	0.68%
Number of years with the company		
1-2years	122	83.5%

3-5years	22	15%
6-8 years	2	1.5%

Source. Bank archives

Result from table 1 indicates that the sample for this study was drawn from 146 employed graduates aged from the ages of 21 to 38 years. Among the respondents are 32.2% females and 67.8 % males.

Hypothesis 1; *there is a positive relationship between aptitude score and sales personnel performance.*

The first hypothesis predicts a relationship between aptitude test score and sales personnel performance. If true, it means that the higher the score recorded for aptitude test the higher sales personnel performance. The correlation analysis on Table 2 displays Pearson correlation coefficients and significant values.

Table 2: Pearson Correlation analysis age and performance scores

		Aptitude test score	Sales Personnel Performance
Aptitude test score	Pearson Correlation	1	.001**
	Sig. (1-tailed)		.002
	N	146	200
Sales Personnel Performance	Pearson Correlation	.001**	1
	Sig. (1-tailed)	.002	
	N	146	146

		Aptitude test score	Sales Personnel Performance
Aptitude test score	Pearson Correlation	1	.001**
	Sig. (1-tailed)		.002
	N	146	200
Sales Personnel Performance	Pearson Correlation	.001**	1
	Sig. (1-tailed)	.002	
	N	146	146
**. Correlation is significant at the 0.01 level (1-tailed).			

The correlation analysis of aptitude test score and Sales Personnel Performance scores yielded a coefficient of 0.01 which indicates significant relationship at $p < 0.001$. It can be concluded, that the two variables ate positively related, therefore the hypothesis is accepted.

Hypothesis 2 ***there is a positive relationship between aptitude score and training performance***.

The second hypothesis predicts that the candidates that records high in the aptitude score record better training. If true, we should be able to conclude that aptitude test score was an important factor in training performance score.

The correlation analysis on Table 3 displays Pearson correlation coefficients and significance values.

Table 4: Pearson Correlation analysis aptitude score test and training performance scores

		Aptitude test score	Training performance score
Aptitude test score	Pearson Correlation	1	0.01**
	Sig. (1-tailed)		.002
	N	146	146
Training performance score	Pearson Correlation	0.01**	1
	Sig. (1-tailed)	.002	
	N	146	146
**. Correlation is significant at the 0.01 level (1-tailed).			

The correlation analysis of aptitude test score and training Performance scores yielded a coefficient of 0.02 which indicates significant relationship at $p < 0.001$. It can be concluded, that the two variables are positively related, therefore the hypothesis is accepted.

Hypothesis 3 *there is a positive relationship between aptitude score and age*

The third hypothesis predicts that the age of the candidate, relates to the aptitude score. If true, we should be able to conclude that age was an important factor in aptitude score performance. The correlation analysis on Table 4 displays Pearson correlation coefficients and significant values.

Table 4: Pearson Correlation analysis age and aptitude test scores

		Age	Aptitude Test score performance
Age	Pearson Correlation	1	-.220**
	Sig. (1-tailed)		.003
	N	146	146
Aptitude Test score performance	Pearson Correlation	-.220**	1
	Sig. (1-tailed)	.003	
	N	146	146
**. Correlation is significant at the 0.01 level (1-tailed).			

The correlation analysis of aptitude test score and age yielded a coefficient of -0.23 which indicates

significant relationship at $p < 0.001$. It can be concluded, that the two variables are negatively related, therefore the hypothesis is rejected.

Discussion

The study examined the relationship between aptitude test and sales personnel's performance employed by banks in Ghana. Two out of the three hypotheses formulated were accepted. The result of the first hypothesis showed a positive relationship between aptitude score and sales personnel's performance. The finding is consistent with previous research conducted by (Hough & Oswald, 2000; Viswesvaran & Ones, 2002) and found a relationship between aptitude and sales personnel's performance.

The result from the second hypothesis shows a positive relationship between aptitude test score and training performance. Previous research by (Hough & Oswald, 2000; Schmidt & Hunter, 1998, 2004; Viswesvaran & Ones, 2002) affirms the assertion.

The hypothesis was rejected; result is consistent with a study by Avolioa and Waldmana (2007) which established that, decreases in aptitude test score with increasing age are more pronounced for unskilled workers.

Conclusion/ Recommendations

The results from the study show aptitude test score is useful for predicting sales personnel's performance but has its own fall shorts. Currently many organizations use multiple methods to select successful candidates.

The study suggests that the aptitude test should be improved to measure the knowledge and skill required by banks, or discarded as a medium of selecting sales personnel's.

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