Impact of Project Management Technique on The Performance of Guinness Nigeria Plc.

Ibrahim Olawale Olateju
Department of Business Administration and Management Technology
Lagos State University, Ojo
Lagos

Abstract
This empirical study examines the impact of project management techniques on the performance of Guinness Nigeria plc. Many studies have demonstrated the positive impact of project management techniques on the organisational performance of the construction industry. However, there have been fewer studies examining the impact of project management techniques on the organisational performance of the brewery industry. The empirical data were obtained from a survey of 50 members of staff of the organisation. The data collected were analysed using descriptive statistics; correlation analysis and regression analysis. The findings suggest that effective project cost significantly and positively relates to sales turnover and that project quality has an effect on organisational profitability. The study recommended among others that to build a strong work force for project execution and to identify the needs of customers, project quality management must be used and that management must see project management techniques as critical tools in the implementation of the company s strategies.

Keywords: Project Management, Project Quality, Project Cost, Performance

Introduction

Manufacturing projects all over the world require proper management. A business enterprise is primarily established to create value by producing goods and services which society demands. In terms of improving the quality of services delivery to the customer, breweries must manage their production processes effectively and efficiently. Organisations cannot perform excellently well without adequate tools that are needed to improve its ability to plan, implement and control its activities as well as the process in which it utilises its people and resources. This does not come without it's cost. The Nigerian manufacturing industry is now driven by advanced competition brought about by government policies, technological advancement and globalisation.

In the recent past a great deal of attention has been directed towards the development of valid and equitable project management techniques. Every organisation irrespective of size, industry or type manages various activities that are directly or indirectly involved in the production of goods and services. The benefits accrued to an organisation result from the implementation of a technique specific to the company (Cormie and Warren, 2001). The use of project techniques to guide and control projects offer success. The end result of a project must fit the purpose for which it was intended.

Project Management is the discipline of planning, organising, managing resources to bring about the successful completion of specific goals and objectives. It is sometimes, conflated with programme management; however, a program is actually a higher level construct: a group of related and sometimes independent project. The primary challenge of project management is to achieve all the project goals and objectives as well as honouring the preconceived project constraints, while the secondary and most ambitious challenge is to optimise the allocation and integration of inputs necessary to meet predefined objectives, the typical constraint in project management are time, cost and scope.

The study conducted by David (2003), on an empirical study of project management methods in organisations showed that there are problems in applying project management theories in practice. This is attributed to the inability of not being able to determine the appropriate indicators for measuring the project management techniques. He concluded by asserting that there is a need for further research in this area. Harvey (2001) pointed out that there is a problem with the existing traditional approach of project management which was based on the computational planning and control models used for large projects. These models are deterministic in nature. Modern project management techniques are now applied in the organisation. These techniques had led to the development of new product, which are now increasingly used in manufacturing industries.

Existing literatures also revealed that Practitioners that are charged with developing project management competencies within companies are looking for evidence to show that the application of formal project management knowledge and practices produce better project outcomes (Pinto and Slevin 1988, Morris 1987, Ibbs and Kwak 1997).

The increasing demands for quality drinks by increasingly well-informed customers at a competitive price have made the competition in the industry tougher. In the light of the above problems faced by most breweries, there is the need to evaluate the impact of project cost and project quality on sales turnover and profitability of Guinness Nigeria plc. This study looks at the effects of project management techniques on organisational performance of Guinness Nigeria Plc. This organisation was chosen because it is the world leading premium drinks business with an outstanding collection of beverage and alcoholic brands across spirits, wines, and bear categories. This study evaluates the contributions of project management techniques to the success stories recorded by Guinness Nigeria Plc.

The following hypotheses were designed to probe into the impact of project management techniques on organizational performance, a stud of Guinness Nigeria Plc. The rationale of this study is to examine relationship as well as the effects of project management techniques on the performance of Guinness Nigeria Plc.

Hypotheses of the Study

Hypothesis one

There is no significant relationship between project cost and profitability.

Hypothesis two

Project quality does not have an effect on sales turnover.

Guinness Nigeria Plc is a foremost brewing company and one of the leaders in the private sector of the economy. From little beginnings through trade importation and distribution in the 1940s and 1950s, the company built its first brewery in Ikeja in 1962 to satisfy the astronomical demand for its products. Significantly, the brewery was the very first out of the British Isles and indeed, the third Guinness in the world.

The encouraging sales volume of those early years stretched the installed capacity of the brewery and prompted an expansion scheme that doubled it by 1970. The company was to later build another Brewery in Benin in1974 to produce Harp Lager Beer and the facility was expanded to accommodate a second Stout Brewery commissioned.

A third Guinness Brewery was built in Ogba in 1982 to brew Harp Lager Beer. This too, was expanded to include Guinness stout and it's reputedly one of the most modern and technologically driven breweries in Africa. In order to further increase capacity to meet the growing demand for its products, the company in 2004 commissioned another brewery in Aba, Abia State.

Today, the portfolio for the company includes: acclaimed market leaders such as the flagship brand, Guinness Foreign Extra Stout, Guinness Extra Stout, with a new smooth taste; Malta Guinness, the preferred malt drink; Harp Lager Beer noted for its distinct taste and value; Gordon's Spark, an exotic ready to drink product, Smirnoff Ice, a premixed alcoholic drink and the newest addition to the family, Harp Lime.

Share Performance

Guinness was listed on the Nigerian Stock Exchange in 1965 and has an authorised share capital of ₦1billion with over 75,000 shareholders. The company has contributed to the growth and development of the capital market through major initiatives such as irredeemable convertible loan stock in 1993 and 1994 and the successful introduction of the Scrip dividend option in both 1996 and 1997.

Furthermore, the company in 2003 became the first company in Nigeria to pay dividend on bonus shares awarded in the same business year.

Corporate Social Responsibility

Guinness Nigeria is committed to giving back to the society. The company has over the years demonstrated this fact through the involvement in numerous community projects. Some of these include: establishment of Guinness Eye Hospitals in Kaduna, Lagos and Onitsha, Water-of-Life projects in Edo, Abia and Lagos States as well as the sponsorship of the historic publication of a compendium of the past questions and answers of the

University Matriculation Examination (UME) of the Joint Admission and Matriculation Board (JAMB).

Other projects were the donation of computers to about 12 public schools in the country, promotion of Nigeria's art and culture through sponsorship of art competitions, art events and artists and working with its overseas parent company, Diageo Plc to promote a good image for Nigeria abroad through sponsorship of visits by foreign journalists to the country, which has resulted in positive and favourable reports on Nigeria in the international media.

The company has completed its economic empowerment scheme in Northern Nigeria, skills for life, which aims at promoting the commercial dissemination and use of labour-saving, low-cost, human-powered water pumps to increase local capacity for irrigated farming.

The company co-sponsored several arts events last year, one of which was the collaboration with the Pan-African University. Apart from the provision of direct employment to many Nigerians, the company also indirectly provides thousands of job opportunities through such services as supplies, distribution, and transportation and so on.

Literature Review

The development of project management system has come from scholars, writers and practitioners concerned with new ways of enhancing the performance of organisations. Project management evolved in order to plan, coordinate and control complex and diverse activities of modern industries. Project management has been practiced since early civilisation, in 1950s organisations started to systematically apply project management techniques to complex projects.

Project management is defined by Spinner (1997) as managing and directing time, material, personnel, labour and cost to complete a task in an orderly and economical manner and to meet established objectives of time, cost and specification. Maylor (2003) viewed project management as planning, organising, directing and controlling activities in addition to motivating people. One of the most comprehensive definitions of project management is defined by Project Management Institute (PMI, 2000) as the application of knowledge, skills, tools and techniques to meet or exceed stakeholders' needs and expectation of a project.

According to Taylor (1998), project management as a dynamic process that utilises the appropriate resources of the organisation in a controlled and structured manner to achieve some clearly defined objectives identified as strategic needs. It is always conducted within a defined set of constraints which are time, scope and cost.

Maylor (2003), suggested that project management includes planning, organising, directing and controlling activities in addition to motivating what is usually the most expensive resource on the project (which is the people). Maylor ((2003) goes further to show that there is only one consistent feature of modern business and that is change. The way forward now being adopted by many modern businesses is to use project management to manage the change. Therefore, the concepts of change and the methods by which process of change can be managed are only possible through project management. Project management evolved as a powerful tool for organisations (irrespective of size) to achieve their stated organisational goals successfully. Project management as the application of knowledge, skills, tools and techniques to protect activity in order to meet or exceed stakeholders' needs and expectations of a project.

Research has established the relationship between formal project management techniques and project efficiency. Formal project management techniques includes setting goals, scheduling, crafting the project charter, planning, allocation of resources, directing, assessing, remedying any snags and providing documented rules, standards, norms and procedures to the Project Management teams. Organisational performance comprises the actual output or results of an organisation as measured against its intended output (or goals and objectives). According to Richard (2009), organisational performance encompasses three specific areas of firms' outcomes: financial performance (profits, return on investment etc), product/market performance (sales, market share etc) and shareholder return (total shareholder's return, economic value added etc).

Project Management Traditional Triple Concept

Projects need to be performed and delivered under certain constraints which are "quality", "time", and "cost". These are referred to as the "Project Management Triangle" components. One side of the triangle cannot be changed without affecting the others. The time constraint refers to the amount of time available to complete a project. The cost constraint refers to the budgeted amount available for the project. The cost constraint refers to production according to specification.

The discipline of project management is about providing the tools and techniques that enable the project team (not just the project manager) to organise their work to meet these constraints.

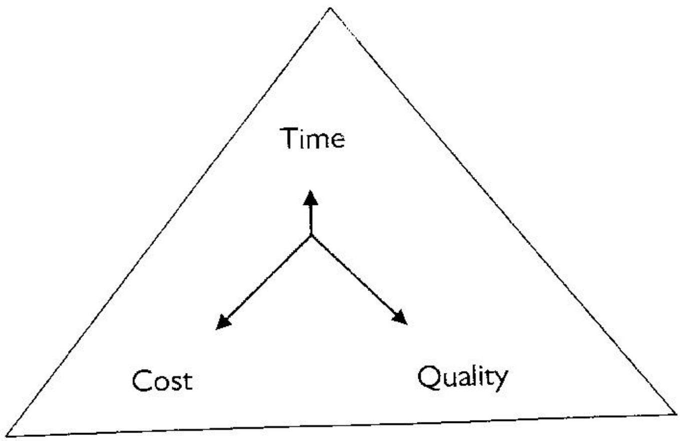

Figure 1: Project Management Triangle

Source: Morris 2003.

Fig. 1 illustrates the relationship between the three primary forces in a project. Time is the available time to deliver the project, cost represents the amount of money or resources available and quality represents the "fit-to-purpose" that the project must achieve to be a success. The normal situation is that one of these factors is fixed and the other two will vary in inverse proportion to each other. For example "Time" is often fixed and the "Quality" of the end product will depend on the "Cost" or resources available. This is represented by the quality arm of the triangle, representing the ability of the 'product' to fulfil users' requirements. More requirements fulfilled a better quality product. In this situation there are three options:

a. Add time – delay the project to give you more time to add the functionality

b. Add cost – recruit, hire or acquire more people to do the extra work

c. Add quality – trade off some non-essential requirements for the new requirements.

If the art of management lies in making decisions, then the art of project management lies in making decisions quickly (Akarakiri, J.B., Irefin, I.A. & Olateju, O.I., 2012)

Martin in 1969 first described the 'Project Management Triangle' of time, cost and quality. Whilst all three elements have always been important, the evolution cost control into relatively precise processes occurred with the industrial revolution in the 18th Century.

Project Quality Management

Quality is the totality of characteristics of an entity that bear on its ability to satisfy stated or implied needs. According to Akarakiri, J.B., Irefin, I.A. & Olateju, O.I. (2012), quality is best provided when the project initiator is close to the customers. Project quality management includes the processes required to ensure that a project will satisfy the needs for which it was undertaken. It includes all activities of the overall management function that determine the quality policy, objectives, responsibility and implementations such as quality planning, quality control quality assurance and quality improvements within the quality system. Quality is not just the responsibility of the quality control department only but the responsibility of all members of staff.

Project Cost Management

Project cost management is concerned with the cost of resource needed to complete project activities. However, project cost management should consider the effect of project decisions on the cost of using project products (Akarakiri, J.B., Irefin, I.A. & Olateju, O.I., 2012). This includes the processes requires to ensure that the project is completed within the approved budget. Financial resources are not always inexhaustible; a project must be completed without exceeding the authorised expenditure. A project might be totally abandoned if funds run out before completion.

Project cost management can be classified into resource planning, cost estimation, cost budgeting and cost control. When project costs are used as components of reward and recognition system, controllable and uncontrollable costs are estimated and budgeted separately to ensure that reward reflect actual performance. In many application areas, predicting and analysing the prospective financial performance of project cost is done outside the project.

Project Management Tools

Most literatures reviewed share the same view on tools for project management. An organisation may use whichever one it considers appropriate for it tasks. The commonly used project management tools are:

1. Brainstorming

This is used in all stages of project management to ensure creative thinking and solve problems. It is a process of free thinking.

2. Work breakdown structure

This is used to analyse the contents of work and cost by breaking such down into manageable components parts. It is produced by identifying the key elements and breaking them down into component parts.

3. *Project Evaluation and Review Technique (PERT)*

PERT is used to analyse the inter relationship between tasks identified by work breakdown structure and the dependences of each tasks.

4. *Critical Part Method (CPM)*

CPM is used in conjunction with the pert analysis to identify the tasks that are critical in determining the overall duration of a project.

5. *Milestone Planning*

This is used to show the major steps needed to reach the goal of a project on time. When several tasks have been completed, the milestone is reached.

6. *Gantt Charts*

These are bar chats used to display and communicate the result of PERT and CPM in simple formats that can be easily understood by those involves in the detail of the project. A Gantt chart is used to keep track of progress for each activities and how cost is running. This is the most flexible project management tool, it shows the inter-dependences of related activities.

Organisational Performance

Productivity implies reaching the highest level of performance with the least expenditure of resources. According to Adamu (1991), performance is a type of relation between output and input. The relations as Adamu states further, compares outputs with one or more inputs, often factors inputs like labour and capital to define some meaningful measures like safe and healthy environment, employees capabilities to solve problem and plan efficiently.
Organisational performance comprises of the actual results of an organisation as measured against its intended output. Richard (2009) stated that organisational performance comprises of three specific areas of a firm's outcome which are financial (profits, return on investment etc.), product/ market performance (sales turnover, market share etc.) and share holder return(economic value added etc).

Organisational performance can be measured in relevance, effectiveness, efficiency and financial viability; these four measures are affected by the organisation's motivation and capacity by its interaction with the environment (kassim, 2012).

Research Methodology

Data Analyses

Hypotheses 1 and 2 were tested using Pearson correlation and regression analysis respectively.

Research Design

The design for the study was a survey design which measured two variables: independent variable and dependent variable. The independent variable was project management techniques which were measured by two sub-variables (cost and quality) and the dependent variable was organisational performance which was also measured by two sub-variables (sales turnover and customer satisfaction).

Sample

The sample of this study consists of 50 employees of Guinness Nigeria plc in Lagos, Nigeria, focusing on the corporate headquarter. This study was carried out in Lagos state, the commercial state of Nigeria.

The study employed stratified random sampling technique cutting across all cadres and departments in the organisation. A total of 60 questionnaires were distributed while 50 were found usable and were analysed. The subjects were made up of 34 males and 16 females

Instrument

The study employed a questionnaire as an instrument for data collection for this research which was divided into six sections, namely A to E. Section A measured the demographic information, sections B to E measured project management in terms of cost and quality dimensions respectively. The study used 20 items with a Likert scale scoring format ranging from "Strongly agree = 5" to "Strongly disagree = 1" for all the indicators.

Operationalisation

Dependent variable is Organisational Performance.
Independent variable is Project Management.
Therefore, Dependent variable is a function of the Independent variable.
Thus, organisational Performance = f (Project Management)
Let O.P be Organisational Performance; and
PMT be Project Management Technique;
.: O.P = f (PMT)

Indicators for Organisational Performance

- Sales turnover
- Profitability

Indicators for Project Management

- Cost
- Quality

Table 1: Descriptive Statistics of Demographics information

Sex	Frequency	Percentage
Male	34	68
Female	16	32
Total	**50**	***100***
Age	Frequency	Percentage
20-29	27	54
30-39	19	38
40-49	4	8
50 and above	0	0
Total	**50**	***100***
Marital Status	Frequency	Percentage
Single	24	48
Married	26	52
Total	**50**	***100***

Educational Background	Frequency	Percentage
SSCE	6	12
OND/NCE	20	40
BSC/HND	22	44
Postgraduate	2	4
Total	***50***	***100***
Length of Service	**Frequency**	**Percentage**
0-3	23	46
4-10 Years	19	38
11-20 Years	6	12
21-30 Years	2	4
Total	***50***	***100***
Staff Structure	**Frequency**	**Percentage**
Junior Employee	7	14
Senior Employee	33	66
Management Staff	10	20
Total	***50***	***100***
Department	**Frequency**	**Percentage**
Marketing	22	44
Personnel	7	14
Operations	15	30
Customer Service	6	12
Total	***50***	***100***

Table 1 showed that there were 34 (68%) males and 16 (32%) females; 27 (54%) of the respondents were of the age ranged 20-29, 19 (38%) were age ranged 30-39, 4 (8%) were of age ranged 40-49, and none is above 50 years old. The table also showed that 24 (48%) of the respondents were single, the married were 26 (52%). The educational background of the respondents showed that 6 (12%) had SSCE certificates, 20 (40%) had OND

(Ordinary National Diploma), NCE (National Certificate in Education) certificates, 22 (44%) had BSC (Bachelor of Science)/HND (Higher National Diploma) certificates. Majority of the respondents had length of service of 4-10 years in the organisation. The cadre of the respondent showed that 7(14%) were junior staff, 33 (66%) were senior staff while 10 (20%) were management staff. The department of the respondents showed that Marketing accounted for 22 (44%), the Personnel were 7(14%), the Operations were 15 (30%), while Customer service were 6 (12%) respectively.

Data Analyses

Hypotheses 1 and 2 were tested using Pearson's correlation and regression analysis respectively.

Hypothesis one

Effective project cost has no significant relationship with sales turnover.

Correlation analysis was used to test this hypothesis.

Table 2

Correlations

		PROJECT COST	SALES TURNOVER
PROJECT COST	Pearson Correlation	1	0.955*
	Sig. (2-tailed)		0.045
	N	4	4
SALES TURNOVER	Pearson Correlation	0.955*	1
	Sig. (2-tailed)	0.045	
	N	4	4

Table 2 showed that there was a significant relationship between project cost and sales turnover ($P < 0.05$ level of significance). The value 0.955 in the model summary represents the correlation coefficient between effective project cost and sales turnover. It shows that there is a very strong positive relationship between effective project cost and sales turnover significant at 0.05 level of significance. and sales turnover

Hypothesis two
Project quality has no effect on profitability.

Regression analysis was used to test this analysis.

Table 3a

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.902	.813	.790	1.903E9

Table 3b

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.262E20	1	1.262E20	34.847	.000
	Residual	2.897E19	8	3.621E18		
	Total	1.552E20	9			

For the purpose of this study, the collected data were analysed using multiple regression analysis technique. The research involved working with the project cost of the corporation (X1) while the dependent variable is profitability.

It was shown in tables 3a and 3b that project quality has effect on profitability ($F_{(1, 8)} = 34.847$; $R = 0.902$, $R2 = 0.813$; $P<0.05$). Therefore project quality has an effect on organisational profitability.

Conclusions

This study looked at the impact of project management techniques on the performance of the textile industry. These techniques include Brainstorming, Critical Path Method (CPM), Gantt Chart, Work Breakdown Structure e.t.c. This study used customer satisfaction and sales turnover as the two major indicators for measuring Business performance. Other indicators like market coverage and liquidity can also be used for further studies. This study used process control, scope of project execution, product competitiveness, and cost of production as the major indicators for measuring project management techniques. Other indicators like time of delivery, product specification can also be used for further studies.

Organisational performance has been hindered by some factors which are cost and quality of products among other factors. From the test conducted, there was a significant relationship between effective project cost and sales turnover. It was also concluded that project quality has a significant effect on profitability. This means that about 81% of the variation in profitability was accounted for by project quality in Guinness Nigeria Plc. This indicated that project management techniques (product quality and product cost) are important in achieving effective organisational performance of the organisation. The practice of project management in Guinness Nigeria plc can be adjudged to be commendable. This view is predicated on the fact that the management system is generally open.

Recommendations

From the analysis of data and research findings, the following recommendations are therefore made, which the research believes will be beneficial to whoever goes through this research work. It is expected to provide added information to Guinness Nigeria Plc, the community and various corporate organisations on the research topic under study. The recommendations are as follows:

(1) Project management help to carry out activities on time and meet stake holders needs
(2) The usage of project cost management is beneficial to the performance of an organisation to a large extent
(3) To build a strong work force for project execution and to identify the needs of customers, project quality management must be used.
(4) A comparative analysis will need to be carried out in the area of project management to enable an organisation have a clear view of how they are being practiced across organisations.

5) Management must see project management techniques as critical tools in the implementation of the company's strategies and therefore must do more than broadly articulating business goals.

References

Adamu S.O. (1991). Productivity Data and Nation Building. *Journal of Industrial Relations*. Vol 5, No 1. pp 21-26.

Akarakiri, J.B., Irefin, I.A. & Olateju, O.I. (2012). An Evaluation of the Effects of Project Management Techniques on the Performance of the Textile Industry in South-Western Nigeria. Transnational Journal of Science and Technology. vol. 2, No.4 pp 28-49.

Asika A. (2004). *Research Methodology a Process Approach*. Mukugamu and Brothers Enterprises, Lagos.

Association for Project Management (2000). *Body of Knowledge 4th edition*. Available at http://www.apm.org.uk ; accessed 5th October 2008

Baker N. et al. (1988). *Determinants of Project Success*, National Technical Information Services N-74-30392, 1974 – see also "Factors affecting Project Success" in Project Management Handbook Cleland, D I and King, W R (eds.), Van Nostrand Reinhold.

Chase, R.B and Aquillano, N.J (1977). *Production and Operation Management*, Revised Edition, Richard D. U.S.A: Irwin Incorporated.

Clement, J.A. (1992). Quality Control. *Encyclopedia of Science and Technology*". Vol. 14, Academic Press Incorporated California pp. 532-537

Cormie, J. and Warren, L. (2001). *Working with Older People. Guidelines for running discussion groups and influencing practice*, Bristol: Policy Press.

David J.B. (2003). Project Management Concepts, Methods and Applications. *International Journal of Operations and Production Management*. Vol. 23, (pp 775- 793),

Harvey M. (2001). Beyond the Gantt Chart. *European Management Journal* Vol. 19, No. 1, pp 92- 100.

Ibbs, C. and Kwak, Y-H. (1997). The benefits of project management – financial and organisational rewards to corporations. *Project Management Institute*. Available at http://www.pmi.org/ accessed 5th November 2008

Maylor, H. (2003). *Project Management* (3rd ed.). London,

Morris P. (1987). *Managing Project Interfaces – key points for project success*, in Project Management Handbook, Van Nostrand Reinhold, pp. 16-55.

Morris, P. (2003): "A Construct for Project-Based-Learning: the PROBOL model" OLK 5 Conference, Lancaster University Management School.

Morris, P.W.G. (2001). Updating the Project Management Bodies of Knowledge. *Project Management Journal* Vol. 32. (3), pp. 21-30

Pinto, J. and Slevin, D. (1989). Project success: Definitions and Measurement Techniques. *Project Management Journal* 19(1), pp. 67- 75.

Project Management Institute (2000). *A Guide to the Project Management Body of Knowledge (PMBoK® Guide)* http://www.pmi.org

Richard E. (2009). Measuring Organisational Performance: Towards Methodological Best Practices. *Journal of Management*

Spinner, M.P. (1997). *Project Management: Principles and practices*. Englewood Cliffs, NJ: Prentice-Hall.

Taylor, J. (1998). *A Survival Guide for Project Managers*. New York: American Management Association.

Turner J., Anne K. and Lynn C., (2000). Learning by Experience in the Project-based Organization, *Proceedings of PMI Research Conference 2000, Paris*, Project Management Institute, Drexel Heath, Penn. UK: Pitman Publishing.

2012 Annual Report and Financial Statements of Guinness Nigeria Plc. www.guinness-nigeria.com

APPENDIX

YEAR	PROFIT AFTER TAX
2003	6,636,335,000
2004	7,913,503,000
2005	4,859,019,000
2006	7,440,102,000
2007	10,691,060,000
2008	11,860,880,000
2009	13,541,189,000
2010	13,736,359,000
2011	17,927,933,821
2012	14,671,194,963

Source: 2012 Annual report and financial statements of Guinness Nigeria Plc. www.guinness-nigeria.com