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DIGITALIZATION OF HUMAN CAPITAL AND PRODUCTIVITY IN NIGERIAN BREWERIES: EVIDENCE FROM GOLDEN GUINEA AND NIGERIA BREWERIES IN ABIA STATE

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ABSTRACT: This study examines the impact of digitalization on human capital productivity in Nigerian Breweries, drawing evidence from Golden Guinea and Nigerian Breweries in Abia State. Three research objectives, questions and hypotheses were raised to guide the study. The study adopted a survey research design. The study population comprised all staff members of the two manufacturing organizations, totaling 868 persons. Using the 'Taro Yamane formula', a sample size of 274 respondents was randomly selected out of 868 persons (senior and junior staff) in the organizations. A questionnaire titled "Digitalization of Human Capital and Productivity Survey Questionnaire" (DHCPSQ), constructed using a 4-point Likert scale, was used for data collection and complemented with secondary data. The research instrument was validated by three experts from the organizations, and a reliability of 0.80 was obtained. Data collected were presented in tables, analyzed using frequency counts, simple percentages, and mean. The hypotheses were tested using Pearson's Product-Moment Correlation Coefficient at a 0.05 significance level. The study found that the degree of employees' commitment to ICT training programmes, ICT professional knowledge, and the educational level of the staff were insufficient; therefore, they had a limited negative impact on the productivity of the brewing firms. It was recommended that the government/business organisations should prioritise funding for the digitalisation of human capital development through ICT training programmes, professional skills development, and educational research to improve productivity in Nigerian brewing firms.

Keywords: Digitalization, Human Capital, ICT Training Programmes, Professional Knowledge, Educational Research, Organic Growth

INTRODUCTION

In every organization, human capital development plays an important role in production. It constitutes the life wire of organizations. The development of effective human capital in the production process is of the greatest importance to any organization (Otiti, 2022). This is so, particularly in the breweries under study, which require skilled, qualified, and competent

manpower who are technically and scientifically able to hold work-related activities and face the challenges therein firmly. The major challenge facing many brewing companies today is poor productivity in both qualitative and quantitative output, which directly or indirectly affects the Nigerian private sector economy. Productivity cannot be increased if the human capital of the organization is not properly trained/ developed in Information and Communication Technology (ICT) skills and competencies, which encompass all technical means used to handle information and facilitate communication. This includes computer and network hardware, as well as their software. Therefore, human resource planning and development are vital for effective productivity of any organization (Pradian, 2020). Productivity cannot be increased if the human capital of the organization is not properly trained/ developed in Information and Communication Technology (ICT) skills and competencies, which encompass all technical means used to handle information and facilitate communication. This includes computer and network hardware, as well as their software. Therefore, human resource planning and development are vital for effective productivity of any organization (Pradian, 2020). The capital of an organization is not only its corporeal tools but also the digitalized skills combined with tested results and the ability of its employees to use the ICT skills or knowledge (Bora, 2021).

Company productivity measures how efficiently a business converts its resources (inputs) like labour, capital, and materials into valuable goods or services (outputs) over a specific period. It is calculated as output divided by input. It is a key indicator of economic performance and long-term success, with higher productivity leading to increased profitability, lower costs, and a stronger competitive edge (Garba, 2021). Productivity is a crucial factor in a company's production performance. Increasing national productivity can raise living standards because an increase in income per capita improves people's ability to purchase goods and services, enjoy leisure, improve housing, and education and contribute to social and environmental programs. Productivity growth can also help businesses to be more profitable (Harry, 2020).

Golden Guinea Breweries Plc is a Nigerian brewery located in Umuahia, Abia State. It was founded in 1962 by the Eastern Nigerian regional government as an indigenous competitor to foreign manufacturers in the country. Its brewing plant is located in Umuahia, which was chosen due to its proximity to a good source of water. Golden Guinea Breweries Plc has the rights to produce and market Bergedorf premium lager beer and Bergedorf Malta in Nigeria under license from Holsten Brewery, Germany. Nigeria Breweries Plc, Aba, on the other hand, was incorporated in 1946; it was the pioneer and largest brewery company. Nigerian Breweries Plc has five product lines, which include Guilder, Stout, Malt, and Juice. Currently, the production lines of Golden Guinea Breweries Plc, Umuahia, and the Nigeria Breweries Plc, Aba, have declined in quality and quantity, with lesser capacity to produce bottles per hour (Ouanga & Moshner, 2023). The fortunes of these brewing firms have direct impacts on the Nigerian economy. Similarly, the operational efficiency of these firms in achieving the necessary productivity is in doubt. It is against this background that this study intends to assess the impact of digitalization of human capital on the productivity of Golden Guinea Breweries Plc, Umuahia, and Nigerian Breweries Plc, Aba, in Abia State.

Statement of the Problem

The success of any organization to a reasonable extent depends on how effectively digitalized human capital is utilized. Every organization has its objectives. As earlier noted, the Golden Guinea Breweries, Umuahia, and Nigerian Breweries, Aba, were established as indigenous competitors to foreign manufacturers in Nigeria. Recently, there have been challenges in the manpower development of the breweries, which affect the productivity of the companies, vis-à-vis the economy. This has negatively affected the individual staff in the organizations under study.

A look at Golden Guinea Breweries, Umuahia, and Nigerian Breweries, Aba, reveals that the rate of productivity among employees is declining significantly. Gbenge (2019) and Ikenga (2021) acknowledged in their work that a significant decline in production currently characterises Nigerian Breweries. Again, there has been a dwindling rate of staff commitment to duty, skills, creativity, ICT professional knowledge, and education level, which has affected productivity in Golden Guinea Breweries, Umuahia, and Nigerian Breweries, Aba, in contrast to Nigeria's economic growth. Gross Domestic Product (GDP) is the standard measure of the value added created through the production of goods and services in a country during a certain period. Consequently, GDP also measures the income earned from that production, or the total amount spent on final goods and services (less imports).

Regrettably, there are conceptual issues in interpreting the meaning of the international differences in Nigeria's per capita income levels. Okwelle (2019) and Ubah (2022) affirmed that most significant measures of the observed high economic cost of living in Nigeria can be expressed in terms of the low productivity and per capita income level, dwindling national income, Gross Domestic Product (GDP), Gross Net Product (GNP), poor balance of trade, etc., as well as increased national debt of the country. Therefore, it is for these observed recurring decimals over the years that motivated the researchers to embark on this study to examine whether ICT training commitment, ICT professional knowledge, and education level among employees predict productivity outcomes in the two Nigerian brewing firms, based on a cross-sectional survey.

Objectives of the Study

The main objective of this study is to evaluate the impact of digitalization of human capital on the productivity of Golden Guinea Breweries, Umuahia, and Nigerian Breweries, Aba, in Abia State. The specific objectives of the study are:

1. To examine the ways in which employees' commitment to ICT training impacts the productivity of the brewing companies.
2. To ascertain ways in which employee ICT professional knowledge can improve the productivity of the brewing companies.
3. To identify ways employees' education level can improve the productivity of the brewing companies.

Research Questions

Based on the objectives of the study, the following research questions were posed:

1. In what ways have the employees' commitment to ICT training impacted the productivity of the brewing companies?
2. In what ways can employees' ICT professional knowledge improve productivity in the brewing companies?
3. In what ways have the employees' education level enhanced productivity in the brewing companies?

Research Hypotheses

The following hypotheses are formulated to guide the conduct of the study:

Ho1: Employees' commitment to ICT training cannot impact the productivity of the brewing companies.

Ho2: Employees' ICT professional knowledge cannot impact the productivity of the brewing companies.

Ho3: Employees' education level cannot impact the productivity of the brewing companies.

LITERATURE REVIEW

Concept of Digitalization

Digitalization is the process of leveraging digital technologies to transform a business model, creating new revenue streams and value-producing opportunities. This involves integrating digital tools and systems into various aspects of a business's operations, from management and communication to production and customer service (Ouanga & Moshner, 2023). In the view of Ikenga (2021), digitalization is the process of utilizing digital technologies, resulting in deeper changes that can transform the core of business models. Ultimately, these changes lead to opportunities for increased efficiency and revenue. Oduba (2018), on his part, sees digitalization as the generic term for the digital transformation of society and the economy. For him, it describes the transition from an industrial age characterized by analogue technologies to an age of knowledge and creativity characterized by digital technologies and digital business innovation. Digitalization is more complex. This could be why Otiti (2022) points out that, digitalization uses digital technologies and digitized information and data, leveraging its power. He maintains that its uses include building or generating revenue, improving and streamlining processes and efficiency, as well as fostering businesses where digital information is at the centre of everything.

Digitalization of Human Capital

Digitalization of human capital consists of the ICT knowledge, skills, etc., which people accumulate throughout their lives that enable them to realize their potential as productive members of society. This could have inspired Okwelle (2019) to contend that people can end extreme poverty and create more inclusive societies by developing digitalized human capital. For him, the term human capital refers to the economic value of workers' knowledge and skills. He asserts that digitalized human capital encompasses assets such as ICT education, training, intelligence, skills, health, and other factors that employers value, which transcend loyalty and punctuality. As such, it is an intangible asset or quality that is not (and cannot be) listed on a company's balance sheet. This could have positioned the mind of Pradian (2020) to hold that human capital is an intangible asset not listed on an organization's balance sheet. For him, human capital is said to include qualities like an employee's experience and skills, arguing that since all labour is not considered equal, employers can improve human capital by investing in ICT training and education to the benefit of their employees and the organization.

Digitalization of human capital is perceived to have a relationship with economic growth, productivity, and profitability of business organizations. Like any other asset, human capital can depreciate over extended periods of unemployment and the inability to keep pace with technological advancements and innovation (Michael, 2016). An organization is often said to only be as good as its people from the top down, which is why human capital is so important to a company. It is typically managed by an organization's Human Resources (HR) department, which oversees workforce acquisition, management, and optimization. Its other directives include workforce planning and strategy, recruitment, employee training/development, reporting, and analytics (Bora, 2021).

Concept of Productivity

Productivity is the efficiency of production of goods or services expressed by some measure. According to Harry (2020), measurements of productivity are often expressed as a ratio of an aggregate output to a single input or an aggregate input used in a production process, i.e., output per unit of input, typically over a specific period of time. For him, the most common example is the (aggregate) labour productivity measure, one example of which is GDP per worker. This is why Garba (2022) avers that there are many different definitions of productivity (including those that are not defined as ratios of output to input). The choice among them depends on the purpose of the productivity measurement and the availability of data. Writing on this, Mills (2021) points out that the difference between the various productivity measures is usually related (directly or indirectly) to how the outputs and the inputs are aggregated to obtain such a ratio-type measure of productivity.

Measurement of Productivity

Many variables could be used to measure productivity. This work used employee retention, employee discipline, industrial harmony, employee effectiveness, organizational effectiveness, and organizational efficiency.

i. **Employee Retention:** Employee retention can be used to measure productivity because when a hard-working force is made to remain and work with their organization, productivity will continue to increase. When such hardworking employees leave, it will hinder productivity in the organization (Oduba, 2018).
ii. **Employee discipline:** Employees who are very disciplined in performing their functions will add value to the productivity of the organization. Obieze (2023) defined discipline as the positive approach to the creation of an attitude and organizational climate, where the employees conform to the set of rules and regulations of the organization".
iii. **Industrial harmony:** When there is an industrial dispute within an organization, it means productivity will be affected. Regular strike reduces the effective productivity of the organization (Omuya, 2018).
iv. **Employee effectiveness:** When workers are effective, they perform their functions very well, which leads to improved productivity. According to Peretomode & Peretomode (2021), the productivity of an organization is tied and defined by the individual-level actions, relationships, and behavior expressed or manifested within the industry.
v. **Organizational effectiveness:** The extent of organizational effectiveness determines the extent of productivity therein. An effective organization is a productive organization. Almazmomi (2018) defined organizational effectiveness as a measure of how successfully organizations achieve their missions and advance their visions through core strategies.

According to Nnamani and Nwoha (2019), organizational effectiveness refers to how an organization has achieved full self-awareness due in part to:

a) Leaders setting well-defined goals for employees and outlining ways to execute those goals efficiently.
b) Management implementing clear decision-making processes and communication pipelines
c) Engaged employees - who are carefully selected and fairly compensated – to produce work that prioritizes results.

ICT Training in an Organization

ICT training is the systematic process of altering the behaviour or attitude of employees in a direction to increase organizational goals, using modernized computer-based technology. This could have informed Ouanga & Moshner (2023) to recognize development in ICT as a program generally aimed at educating employees beyond the immediate technical requirements of their job, with the main objective of improving the effectiveness of all employees. Aboma (2022) perceives a lack of digitalized human capital as a decrease in productivity and profitability. In his opinion, the more an organization invests in its employees, the higher the chances are that its productivity and success will increase. Digitalization of training is the application of gained ICT knowledge and experience. It can be seen as organized activities aimed at imparting information or instructions to improve the recipient's performance or to help them attain a required level of technological knowledge or skills (Appiah, Boamah, Baryeh, Brown, Ferkah, & Marku-Ablerdu,

2023). ICT training, according to Peretomode and Peretomode (2021), is a planned organizational activity concerned with helping an employee acquire specific and usable skills, knowledge, concepts, attitudes, and behaviors to enable them to perform more efficiently and effectively in their present job. For them, it is related to improving the present job experience, pointing out that it concerns technical and manual skills for non-managerial staff.

Employee ICT Professional Knowledge/Skills in the Organization

By honing their professional skills, employees can better position themselves for success in the competitive job market. It is crucial to continuously update and adapt one's professional skills to stay ahead in a rapidly changing work environment. Building on this ideology, Otiti (2022) argues that investing in employees' professional skills can enhance their employability and open doors to new opportunities within and outside the organization. He notes that professional skills are a set of abilities and competencies that employees acquire over time, enabling them to perform their job efficiently. In the view of Nwokeoma (2023), professional skills can be classified into two broad types: hard skills and soft skills, noting that hard skills are job-specific skills and proficiencies that are teachable and often measurable, such as proficiency in a foreign language or the ability to use computer software. Soft skills, on the other hand, relate to employees' interpersonal and communication skills, problem-solving abilities, and emotional intelligence (Okwelle, 2019). Both hard and soft skills play a crucial role in employees' professional success, enabling them to effectively execute their job roles, collaborate with colleagues, and advance within their careers. Examples of professional skills include communication skills, which are essential for almost all jobs. Good communication skills enable employees to articulate his/her ideas clearly, listen to others effectively, and work well in teams (Ronald, 2020).

Employee Education Level in the Organization

In very simple terms, employee education refers to the form of education provided to employees with the intention of improving their efficiency and productivity as members of the organization or society. Ubah (2022) substantiates this point when he states that education is given to enable workers to develop their productive capacities and to understand the day-to-day problems that may confront them in their work situation. He posits that "workers' education means to appreciate and appraise the activities of any organization that seeks to protect the interests in their work relationship and to contribute fully and effectively towards the development of the society to which they belong". Idoko (2019) submits that employee education has a direct correlation with business outcomes (both near-term and long-term) and Return on Investment (ROI). Writing on the same subject matter but from a different perspective, he notes that workers from various social categories manage a country's economy. An economy is the productive section of society, via production, distribution, and consumption of goods and services in society. The productivity of the economy can be enhanced when the workers who serve as drivers are adequately equipped in terms of skills, technology, and other relevant factors (Umeh, 2018).

Since this realization, there has been humanitarian concern for the workers (especially the industrial workers) either for themselves through the union, or by the organization/employers in terms of improving the conditions of work and living. This certainly calls for the empowerment of workers

to enable them to face the challenges before them. As previously noted, the world is a dynamic one, and as such, workers must continually update their knowledge and skills. New knowledge, methods, strategies, and procedures will enable the workers to remain relevant in their work. Primarily, the acquisition of new knowledge and skills will enable workers to remain efficient and up-to-date in the performance of their duties (Abuma, 2022).

Theoretical Framework

This work is anchored on human capital theory as the framework of analysis. The theory was primarily developed by Gary Becker in his 1964 seminal book, Human Capital: A Theoretical and Empirical Analysis, which posits that education, training, and health are investments that enhance a person's skills, knowledge, and overall productivity, leading to higher future earnings and economic growth. This theory views individuals as assets and regards investments in human capital, such as education and on-the-job training, as a means for individuals to enhance their productivity and earning potential throughout their lifetime. Essentially, this theory serves as a framework for analysis, focusing attention on the following concepts: investment in human capital, human capital as an asset, returns to investment, firm-specific versus general training, and productivity, as well as earnings.

The productivity of Golden Guinea Breweries, Umuahia, and Nigerian Breweries, Aba, in Abia State depends on the extent to which the organizations enhance the digital human capital - examining whether ICT training commitment, ICT professional knowledge, and education level among employees predict productivity outcomes in the manufacturing organizations, based on a cross-sectional survey. In the two firms, it is evident that employees invest in their human capital by accepting lower wages during training or by paying for education, expecting to recoup these costs through higher wages and productivity in the future. Becker distinguished between firm-specific training, which benefits a particular company, and general training, which is transferable to any firm. The core idea is that increased human capital leads to higher productivity, which in turn translates into higher wages and better labour market outcomes for the individual.

Therefore, the productivity of Golden Guinea Breweries, Umuahia, and Nigerian Breweries, Aba, in Abia State depends on the extent to which there is active and committed management, improved employee ICT training, professional skills, and a high level of employee education within the organizations. It is only when companies have effective management in place (i.e., employees are committed to ICT training, professionally skilled, and highly educated, allowing for digitalized processes) that the expected productivity can be achieved in organizations. By nature, causal estimates of the return to education are *ceteris paribus* tests of human capital theory. However, the value of skills learned in school is contextual and depends on the technology of workplace production, as well as the broader context of the brewing industry.

RESEARCH METHOD

A survey research design was applied for the study. The population of the study consisted of the entire staff in Golden Guinea Breweries Plc, Umuahia, and Nigeria Breweries Plc, Aba**,** Abia State, with a population size of 868 staff. The breakdown of the two Breweries shows that Golden Guinea

Breweries Plc, Umuahia, has a staff population of 374, while Nigeria Breweries Plc, Aba, has a staff population of 494. Using the 'Taro Yamane formula', a sample size of 274 respondents was randomly selected out of 868 staff (senior and junior staff) in Golden Guinea Breweries Plc, Umuahia, and Nigeria Breweries Plc, Aba**,** Abia State. The researchers used both primary and secondary methods. The questionnaire was the primary data. The questionnaire was framed in a four-point Likert format, with options ranging from "strongly agree" to "strongly disagree." A questionnaire titled Digitalization of Human Capital and Productivity Survey Questionnaire (DHCPSQ) was framed from the research questions, and each research question was used to develop four questionnaire items; hence, the questionnaire (on the subject matter) is 12. Moreover, textbooks, journals, and online sources were used as secondary sources of data. For validation of the instrument, face validity was used. Additionally, the test-retest method of reliability was employed and confirmed through Pearson's Product-Moment Correlation Coefficient Statistics, yielding a reliability index of 0.80. This indicated a high level of reliability. The data collected were analyzed using frequency counts, simple percentages, mean statistics, and Pearson's Product-Moment Correlation Coefficient (r), at a 0.05level of significance, to test the hypotheses. A simple percentage was used to determine the percentage of responses from the respondents on their biodata. Mean statistics were used to determine the level of agreement and disagreement among the respondents for each questionnaire item related to the constructed variables (i.e., subject matter in the objectives). According to Asika (2008), there is a need to establish decision rules in empirical research to determine the level of relationship among variables. Therefore, the decision rule for interpreting the results of the data analysis was that a mean score of 2.5 and above was regarded as agreed/accepted, while a score below 2.5 was considered disagreed/rejected.

DATA PRESENTATION AND ANALYSIS

It should be noted that out of 274 copies of the questionnaire distributed, only 264 copies were properly filled and returned, whereas 10 copies were not returned.

Research Question One: In what ways have the employees' commitment to ICT training impacted the productivity of the brewing companies?

Table 1: Employee Commitment and Productivity

S/N	Questionnaire Items	SA	A	D	SA	N	∑X	Mean	DEC
1	Employees are not committed to ICT training, and as such, they are ready to accept challenges.	57 312	61 204	68 122	78 57	264	625	2.37	Disagreed
2	High-level ICT training is essential for enhancing production.	93 372	81 243	64 128	26 26	264	769	2.91	Agreed
3	Low levels of productivity in the companies are found in employees who have little commitment to ICT training.	85 340	79 237	62 124	38 38	264	739	2.80	Agreed

4	Few ICT-trained employees perform their jobs creditably in the companies.	74 295	70 210	65 130	55 55	264	690	2.61	Agreed
	Grand mean							**2.67**	Agreed

Source: Survey Data, 2024

Table 1 revealed that the respondents in items 2, 3, and 4, with mean scores above 2.50, agreed that the employees' slight commitment to ICT training had a low impact on the productivity of the brewing companies. In contrast, only the respondents in item 1, with mean scores below 2.50, disagreed. Furthermore, the grand mean for research question 1 is 2.67, which underscores the fact that people believe that there is low employee commitment to ICT training, which has a low impact on the productivity of the brewing companies.

Research Question Two: In what ways can employees' ICT professional knowledge improve productivity in brewing companies?

Table 2: Employees' ICT Professional Knowledge and Improved Productivity.

S/N	Questionnaire Items	SA	A	D	SA	N	∑X	Mean	DEC
5.	ICT professional skills are a set of abilities and competencies that improve employees over time, enabling them to perform their job efficiently.	98 392	83 249	50 100	33 33	264	774	2.93	Agreed
6.	ICT professional skills encompass employees' interpersonal and communication skills, as well as their problem-solving abilities, which collectively enhance productivity.	86 344	75 225	67 134	36 36	264	739	2.80	Agreed
7.	ICT professional skills can also encompass written skills, including the production of reports and other professional documents.	69 276	78 234	67 134	55 55	264	699	2.65	Agreed
8.	Hard and soft skills play a critical role in employees' ICT professional success, which enables them to effectively execute their jobs, collaborate with colleagues, and advance within their careers.	77 308	71 213	66 132	49 49	264	703	2.66	Agreed
	Grand mean							**2.76**	Agreed

Source: Survey Data, 2024

As shown in Table 2, all respondents in items 1, 2, 3, and 4, with mean scores above 2.50, agreed that the ways employees' ICT professional knowledge could improve productivity in brewing

companies. Furthermore, the grand mean for research question 2 is 2.76, indicating that people believe employees' ICT professional knowledge can improve productivity in brewing firms.

Research Question Three: In what ways have the employees' education level enhanced their potential in the brewing companies?

Table 3: Employees' Education Level and Potential of Workers.

S/N	Questionnaire Items	SA	A	D	SA	N	∑X	Mean	DEC
9.	Education given to workers enables them to develop their productive capacities,	90 360	80 240	54 108	40 40	264	748	2.83	Agreed
10.	Education gives employees the idea to understand the day-to-day problems and ways to confront them in their work situation.	35 140	62 186	79 158	88 88	264	572	2.17	Disagreed
11.	The acquisition of new knowledge and skills will help workers remain efficient and current in the performance of their duties.	80 320	70 210	60 120	54 54	264	704	2.67	Agreed
12.	Employee education has a direct correlation with business outcomes (both near-term and long-term) and return on investment (ROI).	85 340	72 216	61 122	46 46	264	724	2.74	Agreed
	Grand mean							**2.60**	Agreed

Source: Survey Data, 2024

Table 1 revealed that the respondents in items 1, 3, and 4 with mean scores above 2.50 agreed on the extent to which employees' commitment to ICT training impacted the productivity of the brewing companies. While only the respondents in item 10 with mean score below 2.50 disagreed. Furthermore, the grand mean for research question 3 is 2.60, which underscores the fact that people believe that there is a low level of employees' commitment to ICT training, and has resulted in low productivity in the brewing companies.

Testing of Research Hypotheses

Ho1: Employees' commitment to ICT training cannot impact the productivity of the brewing companies.

To test hypothesis one, the data in Table 1 were used.

Ha1	Employees' commitment to ICT training can impact the productivity of the brewing companies.	Pearson Correlation (r) = 0.9954 Sig = 0.05 N = 264 Grand mean = 2.67	**VALID**

The table above shows that Pearson's Product-Moment Correlation is 0.9954, which indicates that there is a correlation between employees' commitment to ICT training and productivity level in Golden Guinea Breweries Plc, Umuahia, and Nigeria Breweries Plc, Aba**,** Abia State.

Ho2: Employees' ICT professional knowledge cannot impact the productivity of the brewing companies.

To test the hypothesis two above, data in Table 2 was used.

Ha2	Employees' ICT professional knowledge can impact the productivity of the brewing companies.	Pearson Correlation (r)= 0.7778 Sig = 0.05 N = 264 Grand mean = 2.76	**VALID**

The table above shows that Pearson's Product-Moment Correlation is 0.7778, which indicates that there is a correlation between employees' professional knowledge and the degree of productivity in Golden Guinea Breweries Plc, Umuahia, and Nigeria Breweries Plc, Aba**,** Abia State.

Ho3: Employees' education level cannot impact the productivity of the brewing companies.

For the test of hypothesis three, the data in Table 3 were used.

Ha3	Employees' education level can impact the productivity of the brewing companies.	Pearson Correlation (r) = 0.9823 Sig = 0.05 N = 264 Grand mean = 2.60	**VALID**

The table above shows that Pearson's Product-Moment Correlation is 0.9823, which indicates that there is a correlation between employees' education and productivity level in the operations of Golden Guinea Breweries Plc, Umuahia, and Nigeria Breweries Plc, Aba**,** Abia State.

Discussion of Findings

The analysis of question one revealed that employees' commitment to ICT training could impact the productivity of the brewing firms, which is in tandem with the alternative hypothesis earlier postulated. Further assessment revealed that the employees' commitment to ICT training could enhance the output of Golden Guinea Breweries Plc, Umuahia, and Nigeria Breweries Plc, Aba, Abia State, if effectively utilized in the brewing firms, with a grand mean of 2.67. This finding is in agreement with Peretomode and Peretomode (2021), who posited that ICT training involves planned organizational activities concerned with helping an employee acquire specific and usable skills, knowledge, concepts, attitudes, and behaviors to enable them to perform more efficiently and effectively in their present job. In support of this position, Aboma (2022) noted a perceived lack of digitalized human capital as a contributing factor to decreased productivity and profitability. In his opinion, the more an organization invests in its employees, the higher the chances are that its productivity and success will increase. Following this outcome, Ouanga and Moshner (2023) noted that development in ICT as a programme generally aimed to educate employees beyond the immediate technical requirements of their job, with the main objective of improving the effectiveness of all employees. In support of this result, Oduba (2018) observed that low levels of employee commitment to ICT training are found in employees who are not committed to organizational goals, but rather to their personal success.

The analysis of question two indicated that employee ICT professional knowledge could lead to improved productivity in the operations of manufacturing organizations, which is in agreement with the alternative hypothesis earlier postulated. Evidence showed that employees' ICT professional knowledge/skills could positively improve the efficiency of Golden Guinea Breweries Plc, Umuahia, and Nigeria Breweries Plc, Aba**,** Abia State, with a grand mean = 2.76. This finding is supported by Otiti (2022), who argued that by investing in employees' professional skills, they can enhance their employability and open doors to new opportunities within and outside the organization, noting that professional skills are a set of abilities and competencies that employees acquire to improve over time, which enable them to perform their job efficiently. Corroborating this ideology, Nwokeoma (2023) posits that professional skills can be classified into two broad types: hard skills and soft skills, noting that hard skills are job-specific skills and proficiencies that are teachable and often measurable, such as proficiency in a foreign language or the ability to use computer software.

The analysis of question three showed that employees' education level could impact the productivity of Golden Guinea Breweries Plc, Umuahia, and Nigeria Breweries Plc, Aba**,** Abia State, which is in line with the alternative hypothesis earlier postulated. Further evaluation showed that high employee education could lead to high output in the brewing firms, and vice versa, with a grand mean =2.60. This finding aligns with Idoko (2019), who posits that employee education has a direct correlation with business outcomes (both near-term and long-term) and Return on Investment (ROI). Substantiating this position, Ubah (2022) stated that education is given to enable workers to develop their productive capacities, to understand the day-to-day problems that may confront them in their work situation Corroborating the upshot, a staff of the Nigeria Breweries Plc, Aba**,** Abia State, while in an interview with him, stated that the acquisition of new knowledge and skills through education would help workers remain efficient and current in the performance

of their duties. Further findings suggested that the current standard of the education system is inadequate to achieve outstanding productivity in the brewing firms.

Conclusion

Digitalization of human capital tends to migrate, especially in global economies. It has the capacity to transform human capital and productivity, enabling the brewing firms to thrive in a rapidly changing system. Digitalized ICT training is the systematic process of altering the behaviour or attitude of employees in a direction to increase organizational goals, using modernized computer-based technology. By embracing digitalization and investing in digital skills, businesses can unlock new levels of efficiency, innovation, and development. As digitalization continues to evolve, the brewing firms need to prioritize human capital development and strategic implementation to maximize productivity gains. That is why there is often a shift from productive firms to more productive firms. This describes the process that keeps certain brewing firms unproductive while others become even more productive. Development as a programme should aim to educate employees beyond the immediate technical requirements of their job, with the primary objective of enhancing their effectiveness or efficiency in the brewing firms.

Recommendations

Based on the findings, the following recommendations are made:

1. The brewing firms should prioritize funding for ICT training programmes and research by allocating a significant portion of their budget to this area to enhance the outputs of the companies.
2. The brewing firms should encourage employees' ICT professional knowledge/skills to enhance the productivity of the manufacturing organizations. Measures should be implemented to address the scarcity of ICT professional skilled personnel in the firms, to enhance productivity
3. Finally, the brewing firms should have mechanisms for formulating and implementing an employment education policy to improve productivity for organic growth of the companies.

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